

Environmental & Engineering Services Nationwide



PHASE I ENVIRONMENTAL SITE ASSESSMENT

26555 Northwestern Highway | Southfield, Michigan PM Project Number 01-7009-0-0001

Prepared for:

Oakland County 2100 Pontiac Lake Road Pontiac, Michigan 48328-2735

Prepared by:

PM Environmental, Inc. 4080 West 11 Mile Road Berkley, Michigan 48072

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June 6, 2016

Mr. Dan Hunter
Oakland County
2100 Pontiac Lake Road
Pontiac, Michigan 48328-2735

Re: Phase I Environmental Site Assessment of the Office Building

Located at 26555 Northwestern Highway

Southfield, Michigan

PM Environmental, Inc. Project No. 01-7009-0-0001

Dear Mr. Hunter:

PM Environmental, Incorporated (PM) has completed the Phase I Environmental Site Assessment (ESA) of the above referenced property. This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries {(AAI), 40 CFR Part 312} and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-13 (ASTM Standard Practice E 1527-13).

The Phase I ESA for the above referenced property represents the product of PM's professional expertise and judgment in the environmental consulting industry, and it is reasonable for **OAKLAND COUNTY** to rely on PM's Phase I ESA report.

If you have any questions related to this report please do not hesitate to contact our office at (248) 336-9988.

Sincerely,

PM ENVIRONMENTAL, INC.

Tonia Hack Staff Consultant Kevin Kruszewski, P.G.

V.P. Environmental Risk Management

EXECUTIVE SUMMARY

PM Environmental, Inc., (PM) was retained to conduct a Phase I Environmental Site Assessment (ESA) of the Office Building located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan (hereafter referred to as the "subject property"). This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries {(AAI), 40 CFR Part 312} and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-13 (ASTM Standard Practice E 1527-13).

THIS REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF <u>OAKLAND COUNTY</u>, WHOM MAY RELY ON THE REPORT'S CONTENTS.

Item	Comments	
Number of Parcels and Acreage	Three parcels containing 22.84 acres	
Number of Building(s) and Square Footage	One three to four-story building with partial basement totaling 310,161 square feet	
Current Property Use	Vacant; no current business operations	

Reasonably ascertainable records reviewed as part of this Phase I ESA documented the use of the property back to 1940. Data failure was identified prior to that date. In PM's professional opinion, this data failure does not represent a significant data gap.

Review of historical sources indicates the subject property was developed prior to 1940 with a dwelling in the northeastern portion, with outbuildings constructed southwest of the dwelling between 1940 and 1949, and a commercial building constructed north of the dwelling in the northeastern portion between 1952 and 1957, which was occupied by Ricky's Farm House (likely an agricultural supply store). All of the structures were demolished between 1957 and 1963, and the property was vacant land until the current building was constructed between 1965 and 1969, with an addition constructed to the southern portion in 1981. The current building was occupied by Federal Mogul Corporation from initial construction until approximately 2014 (who used the building as office space), as well as additional office operations from 1994 to 2014, and has been vacant since 2014.

The following table summarizes the conditions identified as part of this assessment. Affirmative answers are further discussed below the table:

Type of Condition	Identified During the Course of this Assessment
De Minimis Condition	No
Significant Data Gap	No
Historical Recognized Environmental Condition (HREC)	No
Controlled Recognized Environmental Condition (CREC)	Yes
Recognized Environmental Condition (REC)	Yes

Controlled Recognized Environmental Condition

A CREC, as defined in the ASTM Standard, is a recognized environmental condition (REC) resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following CREC was identified:

• Review of previous site investigations documents concentrations of 1,2,4-trimethylbenzene are present in groundwater slightly above current MDEQ Part 213 Residential and Nonresidential Drinking Water (DW) criteria. Although the regulatory database lists the subject property as an open LUST site, review of information available online through the MDEQ documents the status of the LUST is listed as closed, indicating the Tier I Restricted Residential Closure submitted in December 2015 was accepted, or the LUST was granted administrative closure (i.e., MDEQ did not review the 2015 Tier I Restricted Residential Closure within six months). Based upon this information and restrictive covenant institutional controls for the subject property as part of the restricted closure, PM has identified the closed LUST status as a CREC.

As per the ASTM Standard, CRECs are also identified as RECs. Refer to the REC bullet below for additional information.

Recognized Environmental Condition

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the Office Building located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan, the property. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions connected with the property except the following:

• The subject property is a closed LUST site with one reported release in 2007. Previous site investigations document concentrations of 1,2,4-trimethylbenzene are present in groundwater slightly above current MDEQ Part 213 Residential and Nonresidential Drinking Water (DW) criteria. A Tier I Restricted Residential Closure was submitted in December 2015 with a restrictive covenant prohibiting the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose, which was likely granted within the last 30 days based on the discrepancy between regulatory database information and information available online through the MDEQ.

No adjoining and/or nearby RECs have been identified.

Recommendations

This REC has been brought to the attention of the client within the requirements of the ASTM Standard Designation E-1527-13.

A Tier I Restricted Residential Closure was submitted to the MDEQ in December 2015, with a restrictive covenant prohibiting the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose, which is currently pending. If the

LUST closure is denied, additional subsurface investigations may be necessary in the future. However, because the LUST closure is currently pending, no additional investigations are recommended at this time.

The summary presented above is general in nature and should not be considered apart from the entire text of the report, which contains the qualifications, considerations and subject property details mentioned herein. Details of findings and conclusions are elaborated upon in this report.

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (248) 336-9988 to discuss this report.

REPORT PREPARED BY:

PM Environmental, Inc.

Tonia Hack Staff Consultant **REPORT REVIEWED BY:**

PM Environmental, Inc.

LaNeicia Meyer

Senior Project Consultant

Kevin Kruszewski, P.G.

V.P. Environmental Risk Management

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Appendix C: Previous Site Investigations

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Appendix F: Acronyms and Terminology, Scope of Work, ASTM Reference Document, and

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1.0 INTRODUCTION

This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries {(AAI), 40 CFR Part 312} and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-13 (ASTM Standard Practice E 1527-13).

THIS REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF <u>OAKLAND COUNTY</u>, WHOM MAY RELY ON THE REPORT'S CONTENTS.

PM acknowledges that this party may rely on the contents and conclusions presented in this report. Unless stated otherwise in writing, PM makes no other warranty, representation, or extension of reliance upon the findings of this report to any other entity or third party.

1.1: Property Overview

Subject Property Location/Address	26555 Northwestern Highway, Southfield, Oakland County, Michigan	
Number of Parcels and Acreage	Three parcels containing 22.84 acres	
Number of Building(s) One three to four-story building with partial basement totaling 310,1 square Footage		
Current Property Use Vacant; no current business operations		
Current Zoning	ERO: Education Research – Office	

The subject property location is depicted on Figure 1, Site Location Map. A diagram of the subject property and adjoining properties is included as Figure 2, Generalized Diagram of the Subject Property and Surrounding Area. Photographs taken during the site reconnaissance are included in Appendix A.

1.2: Purpose and Scope of Services

The purpose of this Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify *recognized environmental conditions* (RECs), *controlled recognized environmental conditions* (CRECs), and *historical recognized environmental conditions* (HRECs) in connection with the subject property. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs, CRECs, and HRECs in connection with the subject property.

Acronyms and terms used in this report are described in Appendix F. Additionally, PM's scope of services is included in Appendix F.

1.3: Significant Assumptions

Pursuant to ASTM Standard Practice E 1527-13, PM assumes that the information provided by all sources and parties, including the User, is accurate and complete, except where obvious inconsistencies or inaccuracies were identified.

1.4: Limitations, Deviations, and Special Terms and Conditions

There are no deviations from the ASTM Standard. Non-ASTM Scope considerations are included in Section 11.0. Any physical limitations identified during the completion of this report are referenced in Section 7.0.

Due to changing environmental regulatory conditions and potential on-site or adjacent activities occurring after this assessment, the client may not presume the continuing applicability to the subject property of the conclusions in this assessment for more than 180 days after the report's issuance date, per ASTM Standard Practice E 1527-13.

To the best of PM's knowledge, no special terms or conditions apply to the preparation of this Phase I ESA that would deviate the scope of work from the ASTM Standard Practice E 1527-13.

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small business Liability Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments") (if desired), the User must provide certain information (if available) included on the User Questionnaire to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete. PM provided the User with a copy of the User Questionnaire, which was not returned to PM within the time constraints of this report. Therefore, the lack of a completed User questionnaire is considered a limitation of this report, and, as noted above, could result in a determination that all appropriate inquiry has not been completed.

PM was not provided with a copy of the recorded land title records for subject property by the client and was not requested to complete a title search. Therefore, PM cannot comment on any potential relevant information that may have been obtained through review of these records.

2.0 USER PROVIDED INFORMATION

The ASTM Standard defines a User as "the party seeking to use Practice E 1527 to complete an environmental site assessment. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager." The User has specific obligations for completing a successful application of this practice as outlined in Section 6 of the ASTM Standard Practice E 1527-13.

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments") (if desired), the User must provide certain information (if available) identified in the User Questionnaire to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

PM provided the User with a copy of the User Questionnaire, which was not returned to PM within the time constraints of this report. Therefore, the lack of a completed User questionnaire is considered a limitation of this report, and, as noted above, could result in a determination that all appropriate inquiry has not been completed. Based upon the information obtained during the completion of his report through other reasonably ascertainable sources, the lack of this questionnaire is not likely to affect the conclusions of this report.

2.1: Recorded Land Title Records

PM requested reasonably ascertainable recorded land title records for the subject property from the User. However, PM did not receive any title records from the User within the time constraints of this report. Additionally, PM was not requested to complete a title search by the User. PM did review available environmental lien and activity and use limitations for the subject property, which are further discussed in Section 4.10. Based upon the information reviewed as part of this Phase I ESA, PM has not identified the lack of provided land title records as a data failure that represents a significant data gap.

2.2: Reason for Performing this Phase I ESA

According to the User, this Phase I ESA was conducted as part of environmental due diligence related to purchasing the subject property.

3.0 PHYSICAL SETTING

PHYSICAL SETTI PROPER	SOURCE		
Topography: Refer to F	Figure 1 for an excerpt of the Topographic Map		
Site Elevation	680-690 feet above mean sea level (msl)		
Topographic Gradient	Southeast	United States Geological Survey Division (U.S.G.S.) 7.5-Minute Topographic Map of the Redford, Michigan Quadrangle, 1987	
Closest Surface Water	An unnamed tributary of Rouge River, located approximately 660 feet west to 875 feet south at an elevation of approximately 685 feet (west) to 675 feet (south) above msl		
General Soil Characteristics: Refer to Appendix B for a copy of the soil survey map and soil type descriptions			
Soil Type			
Description	A typical soil profile consists of sand to 60 inches below ground surface (bgs). Permeability is high to very high. Corrosivity is moderate for uncoated steel but low for concrete.	United States Department of Agriculture, Custom Soil	
Soil Type	Urban Land	Resource Report for	
Description	Urban land soils consist of areas covered by commercial buildings, condominiums, apartment buildings, parking lots, streets, sidewalks, driveways, railroad yards, industrial complexes, and other structures. A typical soil profile is not defined. Permeability and available water capacity vary. Corrosivity is not defined.	Oakland County, Michigan (survey area data from September 2015)	

Area Specific Geology/Hydrogeology Characteristics:			
Geology	Geology in the vicinity of the former UST basin generally consists of sand to between silt to between 9.0 feet and 10.0 feet bgs, underlain by silty clay to 20.0 feet bgs, the maximum depth explored. Geology to the north and east of the UST basin consists of sand to between 14.5 feet and 17.0 feet bgs, underlain by silt to 22.0 feet bgs, the maximum depth explored.		
Hydrogeology	Groundwater was encountered at approximately 0.5 feet bgs. Groundwater in the vicinity of the former UST system flows toward the southwest.		
Oil and Gas Wells:			
Current Oil and Gas Wells on Subject Property	None identified	MDEQ Geologic Survey	
Historical Oil and Gas Wells On Subject property	None identified	Division (GSD) web site	

4.0 RECORDS REVIEW

PM reviewed reasonably ascertainable records to identify obvious uses of the subject property from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. Reasonably ascertainable records reviewed as part of this Phase I ESA documented the use of the property back to 1940. Data failure was identified prior to that date. In PM's professional opinion, this data failure does not represent a significant data gap.

4.1: Aerial Photographs and Sanborn Maps

PM reviewed reasonably ascertainable aerial photographs for the subject property area. The sources and years reviewed are identified in the table below. Relevant aerial photographs are included in Appendix B.

PM attempted to review reasonably ascertainable Sanborn Fire Insurance Maps for the subject property. However, no Sanborn Fire Insurance Maps were available for the subject property (Appendix B).

The following table summarizes the sources reviewed and the information obtained about the subject property from these sources. Information obtained about the adjoining properties from these sources is summarized in Section 8.0.

Aerial Summary for the Subject Property

Year and Source	Summary of Information	
1940 Aerial (Oakland County)	A building, consistent with a dwelling, is visible in the northeastern portion, with vacant land throughout the remainder of the property.	
1949 Aerial (WSU)	Similar to the previous aerial year, except two outbuildings are visible southwest of the dwelling.	
1952 Aerial (WSU)	Similar to the previous aerial year.	
1957 Aerial (WSU)	Similar to the previous aerial year, except a building consistent with a commercial building is visible north of the dwelling, in the northeastern portion of the subject property.	
1963 Aerial (Oakland County)	All of the structures have been demolished and the property is vacant land.	
1967 Aerial (WSU)	A portion of the current building is visible in the northern portion.	
1974 Aerial (Oakland County)	Similar to the previous aerial year.	
1980 Aerial (Oakland County)	Similar to the previous aerial year.	
1990 Aerial (Oakland County)	Similar to the previous aerial year, except an addition has been constructed to the southern portion. Appears similar to the current layout.	
1997 Aerial (Oakland County)	Similar to the previous aerial year.	
2000 Aerial (Oakland County)	Similar to the previous aerial year.	
2005 Aerial (Oakland County)	Similar to the previous aerial year.	
2010 Aerial (Oakland County)	Similar to the previous aerial year.	
2015 Aerial (Oakland County)	Similar to the previous aerial year.	

A summary of this information along with other historical sources is included in Section 6.0.

4.2: Local Street Directories

Reasonably ascertainable local street directories for Southfield, Michigan were researched. Directories were available from 1954 to 2014. Directories were researched in at least five-year increments, when available. It should not be construed that the earliest date represented is the initial date of occupancy.

PM also reviewed listings for adjoining commercial properties. Information from the listings reviewed is included in Section 8.0.

Subject Property: 26555 Northwestern Highway

2014-2013	B C A Division Federal Mogul Corporation Federal Mogul Corporation
2012	FME Credit Union Federal Mogul Corporation FME Credit Union
2011	B C A Division Federal Mogul Corporation
2010	Federal Mogul Corporation AT&T
_0.0	FME Federal Credit Union
2009	Federal Mogul
	FME Federal Credit Union
	Mather Seal CO
	Metaltec Inc.
2006-2002	AT&T
	Bca Division Federal Mogul Corporation
	Federal Mogul Corporation
2000-1996	Bca Division Federal Mogul Corporation
	Federal Mogul Corporation
1995-1994	Federal Mogul Corporation
	Mtl Powder Division Fed
	National Seal
1993-1992	Federal Mogul Corporation
1990-1986	Not Listed
1984-1983	Robert Carter Corporation
1981-1954	Not Listed

Historical Subject Property: 26451 Lahser Road

2014-1966	Not Listed
1963-1959	Ricky's Farm House
1957-1954	Residential

A summary of this information along with other historical sources is included in Section 6.0.

4.3: Assessing Department

Reasonably ascertainable assessment information provided by the City of Southfield Assessing Department was obtained and reviewed. Assessing records document that the subject property consists of three parcels containing 22.84 acres and is developed with a 310,161-square foot office building constructed in 1967, with additions constructed in 1969 and 1981. A 2001 historical field card was included in records reviewed, which documents similar information. Copies of available assessment records for the subject property and the current legal description are included in Appendix B.

4.4: Building Department

PM submitted a Freedom of Information Act (FOIA) request to City of Southfield Building Department to review Building Department records for the subject property. Building Department records document a portion of the current building was constructed in 1965 (Permit #9092), with an addition constructed in 1981 (Permit #8993). No additional relevant information was included in records reviewed.

4.5: Fire Department

Reasonably ascertainable assessment information provided by the City of Southfield Fire Department was obtained and reviewed. Fire Department records document that a 2,000-gallon gasoline UST was removed from the loading dock area in 1986. Refer to Section 4.8 for additional information. No additional relevant information was included within the records reviewed.

4.6: Health Department

PM submitted a FOIA request to the Oakland County Health Department to review Health Department records for the subject property. PM received a written response from a representative of the department indicating no files were available for the subject property.

4.7: Utilities

4.7.1: Municipal Water/Water Wells

The subject property is currently connected to municipal water. PM interviewed a representative of the City of Southfield GIS Department, who indicated the subject property was connected to municipal sewer in 1965, which is generally consistent with the initial construction of the current building. The representative could not locate water tap records; however, the representative indicated the subject property was likely connected to municipal water at the same time as municipal sewer. No records of private water wells have been identified through review of reasonably ascertainable information.

PM was unable to determine whether the former dwelling and commercial building on the subject property were connected to municipal water or a private water well. The structures may have been connected to private water wells. Based on the lack of current use, PM has not identified the potential former water wells as a REC.

4.7.2: Sanitary Sewer/Septic System

The subject property is currently connected to municipal water. PM interviewed a representative of the City of Southfield GIS Department, who indicated the subject property was connected to municipal sewer in 1965, which is generally consistent with the initial construction of the current building. No records of private septic fields have been identified through review of reasonably ascertainable information.

PM was unable to determine whether the former dwelling and commercial building on the subject property were connected to municipal sewer or a private septic field. The structures may have been connected to private septic fields. Based on the former residential/retail use, PM has not identified the potential former private septic fields as a REC.

4.7.3: Heat Source

The subject property is connected to natural gas, which is supplied by Consumers Energy. Review of the Consumers Energy SIMS website indicates the subject property was initially connected to natural gas in 1965, which is generally consistent with the initial construction of the current building. Additionally, review of a natural gas distribution map provided by Consumers Energy indicates natural gas has been available to the subject property area since at least 1960. No alternative heat sources have been identified through review of reasonably ascertainable information.

PM was unable to determine the heat source for the former dwelling and commercial building on the subject property prior to 1960. No documentation of fuel oil use was identified during review of reasonably ascertainable records, and no visual evidence of fuel oil use was identified during the site reconnaissance. There is the potential for a fuel oil AST or UST to have been used at the property and for a release to have occurred. However, based upon PM's experience, the risk of a release associated with a potential fuel oil UST is low. If a fuel oil UST is discovered in the future and/or evidence of a release of historical fuel oil is identified, further evaluation may be necessary.

4.8: Underground Storage Tank (UST) Systems

The subject property contained one former 2,000-gallon gasoline UST, which was located east of the subject building in the loading dock, and was removed in 1986 (installation date unknown). Contamination was identified associated with the former UST. Refer to Section 4.9.1 for a summary of LUST investigation activities.

4.9: Previous Environmental Reports

PM reviewed the following previous environmental reports for the subject property. Relevant portions of the reports are included in Appendix C.

Name of Report	Date of Report	Company that Prepared Report
Property Survey	January 20, 1988	Gabriel Environmental & Energy Services (Gabriel)
Phase I ESA	June 16, 1994	Environmental Science & Engineering, Inc.
Asbestos Operations & Maintenance (O&M) Program	April 2004	Clayton Environmental Consultants (Clayton)
Phase I ESA	June 16, 2004	BEM Systems, Inc. (BEM)
Phase II ESA	November 22, 2006	Soil and Materials Engineers, Inc. (SME)
Limited Phase II ESA	May 25, 2007	Environmental Consulting & Technology, Inc. (ECT)
LUST Closure Report	October 22, 2008	Environmental Consulting & Technology, Inc. (ECT)
Asbestos Survey Report	December 9, 2011	Performance Environmental Services, Inc. (Performance)
LUST Closure Report	July 2, 2012	Environmental Consulting & Technology, Inc. (ECT)

Name of Report	Date of Report	Company that Prepared Report
Short-Term Characterization	July 17,	Environmental Consulting & Technology, Inc.
Study	2014	(ECT)
Phase I ESA	August 25, 2014	EBI Consulting (EBI)
LUST Closure Report	December 4, 2015	Environmental Consulting & Technology, Inc. (ECT)

4.9.1: Summary of Previous Environmental Reports

Open or Closed LUST Site:	Open
Release Identification(s):	C-0080-07
Release Date(s)	April 5, 2007
Is soil contamination present above an applicable regulatory level?	No
Is soil contamination delineated in all directions?	Not applicable
Is groundwater contamination present above an applicable regulatory level?	Yes
Is groundwater contamination delineated in all directions?	Yes
Significant deficiencies identified?	No
Additional information:	Multiple subsurface investigations were completed to assess contamination associated with the former UST between 2006 and 2015. Refer to the paragraphs below for additional information.

Asbestos and PCB Investigation Activities: Gabriel completed a property survey in 1988 to identify potential sources of environmental hazards. Gabriel documented the historical presence of a gasoline UST, which was removed in 1986; however, the UST was not assessed as part of the previous property survey. Gabriel identified asbestos in various building materials throughout the building, as well as polychlorinated biphenyls (PCBs) in the mechanical room, which formerly contained two transformers containing PCB oils. According to the Property Survey, asbestos abatement activities were planned for the near future. Additionally, the PCBs within the transformers had been removed at the time of the report, and former personnel were undergoing decontamination procedures. Soil samples were collected from several locations around the foundation of the building and analyzed for metals, sulfides, cyanide, and phenols. Soil analytical results did not identify any contaminants above regulatory guidelines. Based upon this information and the conditions of the building at the time of the assessment, Gabriel determined that the building was in compliance with applicable environmental criteria and regulations.

In 2004, an Operations and Maintenance (O&M) Plan was completed by Clayton, which identified the location of asbestos containing materials (ACMs) and detailed plans for routine work practices in areas where ACMs are present, training requirements for appropriate personnel, emergency response procedures, and periodic surveillance/monitoring activities. Multiple ACMs were identified throughout the subject building, which included floor tiles, mastics, spray-on fireproofing material, tank/pipe insulation, and asbestos cement panels.

In 2011, a NESHAP compliant building survey was completed by Performance to identify potential ACMs. Multiple ACMs were identified throughout the subject building, and abatement of all

friable, non-friable, and assumed ACMs was recommended (if materials are to be removed or disturbed), which included mastics, fire door/frame, elevator brakes, roofing materials, duct insulation, and mudded insulation.

Subsurface Investigation Activities: Previous site investigations were completed at various times by multiple companies between 1994 and 2015, with subsurface investigations completed between 2006 and 2015, to assess contamination associated with a 2,000-gallon gasoline UST, which was removed in 1986. Through multiple subsurface investigations and correspondence between ETC and MDEQ, it was determined that impacted materials in the vicinity of the former UST basin were not impacting any potential groundwater surface water interfaces (i.e., catch basin, storm sewer, sump), and the Drinking Water (DW) pathway is the only potentially complete exposure pathway at the subject property. The 2015 LUST Closure Report documents concentrations of 1,2,4-trimethylbenzene (1,2,4-TMB) are present in groundwater at MW-1 slightly above current MDEQ Part 213 Residential and Nonresidential DW criteria. However, ECT submitted a Tier I Restricted Residential Closure in December 2015, with a restrictive covenant prohibiting the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose, which is currently pending.

Review of previous site investigations documents concentrations of 1,2,4-trimethylbenzene are present in groundwater slightly above current MDEQ Part 213 Residential and Nonresidential Drinking Water (DW) criteria. Although the regulatory database lists the subject property as an open LUST site, review of information available online through the MDEQ documents the status of the LUST is listed as closed, indicating the Tier I Restricted Residential Closure submitted in December 2015 was accepted, or the LUST was granted administrative closure (i.e., MDEQ did not review the 2015 Tier I Restricted Residential Closure within six months). Based upon this information and restrictive covenant institutional controls for the subject property as part of the restricted closure, PM has identified the closed LUST status as a CREC.

4.10: Environmental Liens, Activity and Use Limitations, and Government Institutional and Engineering Controls

PM has not identified any record of environmental liens, activity and use limitations, or institutional controls or engineering controls associated with the subject property through review of reasonable ascertainable records.

5.0 INTERVIEWS

The objective of completing interviews with knowledgeable site contacts is to obtain information about the uses and physical characteristics of the property. In general, interviewees supported the information reviewed from other historical sources (i.e. aerial photos, city records, etc.).

Represents	Interviewed	Name and Title	Length of Time Associated with Subject Property	Comments
Current Property Owner	Yes	Mr. Steve Spayer, the current owner	Approximately 20 years	Mr. Spayer stated that the subject property has been vacant since January 2014, and the property was historically utilized for office activities. No additional relevant information was provided.
Former Property Owner	No	Not applicable	Not applicable	Contact information for the former owner was not reasonably ascertainable or provided by the User
Key Site Manager	No	Not applicable	Not applicable	The subject property is currently vacant and therefore no Key Property Manager was available for interview
Current Occupant(s)	No	Not applicable	Not applicable	The subject property is currently vacant and therefore no Current Occupants were available for interview
Former Occupant(s)	No	Not applicable	Not applicable	Contact information for the former occupants was not reasonably ascertainable or provided by the User
Other(s)	No	Not applicable	Not applicable	No other relevant interviews were conducted as part of this Phase I ESA.

6.0 SUMMARY OF HISTORICAL USE

Review of historical sources indicates the subject property was developed prior to 1940 with a dwelling in the northeastern portion, with outbuildings constructed southwest of the dwelling between 1940 and 1949, and a commercial building constructed north of the dwelling in the northeastern portion between 1952 and 1957, which was occupied by Ricky's Farm House. All of the structures were demolished between 1959 and 1963, and the property was vacant land until the current building was constructed between 1965 and 1969, with an addition constructed to the southern portion in 1981. The current building was occupied by Federal Mogul Corporation from initial construction until approximately 2014 (who used the building as office space), as well as additional office operations from 1994 to 2014, and has been vacant since 2014.

PM was unable to determine the operations associated with the former occupant identified as Ricky's Farm House; however, based on PM's extensive experience assessing similar properties, historical operations likely consisted of agricultural supply and/or produce stand activities. Based upon this information, short time frame of former operations (approximately two to 13 years), and time elapsed since former operations took place (approximately 53 to 57 years), PM has not identified the former operations as a REC.

7.0 SUBJECT PROPERTY RECONNAISSANCE

Reconnaissance Information			
PM Field Personnel: Ms. Tonia Hack and Ms. Ginny Dougherty			
Site Reconnaissance Date: May 4, 2016			
Escort:	PM was not escorted during the site reconnaissance		
Limitations:	PM was unable to access the fourth floor of the southern portion of the building (doors and elevator access were locked). PM has not identified this limitation as a significant data gap.		

7.1: Subject Property Observations

The subject building contains three to four stories with partial basement totaling 310,161 square feet, which is divided into a lobby, offices/office areas, cafeteria, kitchen, auditorium, conference rooms, IT room, mechanical room, restrooms, storage areas, and parking garage. Interior finish materials include carpet, 12-inch by 12-inch vinyl floor tiles, poured concrete floors, brick floors and walls, concrete block walls, wood and plastic panel walls, drywall walls and ceilings, two-foot by two-foot and two-foot by four-foot acoustic ceiling tiles, and metal deck ceilings.

Asphalt-paved parking areas are present south of the subject building, with an asphalt paved drive in the northwestern portion and a concrete-paved loading dock east of the building. The remainder of the property contains groomed grass and landscaped areas.

The following table summarizes the site observations. Affirmative responses are discussed in more detail following the table.

Category	Feature	Observed
	Elevators	Yes
	Air Compressors	Yes
	Incinerators	No
	Waste Treatment Systems	No
Interior Equipment	Presses/Stamping Equipment	No
Interior Equipment	Press Pits	No
	Hydraulic Lifts or In-ground hoists	No
	Paint Booth	No
	Plating Tanks	No
	Lathes, Screw Machines, etc.	No
Ab	Aboveground Storage Tanks (ASTs)	No
Aboveground Chemical or	Drums, Barrels and/or Containers > 5 gallons	Yes
Other Waste Storage or Waste Streams	Chip Hoppers	No
Waste Streams	Hazardous or Petroleum Waste Streams	No
	Underground Storage Tanks	No
	Fuel Dispensers	No
Underground Chemical or	Sumps or Cisterns	Yes
Waste Storage, Drainage or	Dry Wells	No
Collection Systems	Oil/Water Separators	No
	Floor Drains, Trench Drains, etc.	Yes
	Pipeline Markers	No
	Stressed Vegetation	No
Exterior Observations	Stained Soil or Pavement	No
	Monitoring Wells	Yes

Category	Feature	Observed
	Pad or Pole Mounted Transformers and/or Capacitors	Yes
	Soil Piles of Unknown Origin	No
	Exterior Dumpsters with Staining	No
	Leachate or Other Waste Seeps	
	Trash, Debris, and/or Other Waste Materials	
	Uncontrolled Dumping or Disposal Areas	
	Surface Water Discoloration, Sheen or Free Product	No
	Strong, Pungent or Noxious Odors	No
	Storm water retention or detention ponds	No
	Pits, Ponds, Lagoons	

Elevators: Seven hydraulic lift elevators are located at the subject property, with five elevators installed between 1967 and 1969 and two elevators installed in 1981. Because five of the units were installed prior to 1978 (the USEPA banned the manufacturing of PCB-containing hydraulic fluid in 1976, and the manufacture of PCBs ceased in 1977), PM is of the opinion that the elevator's hydraulic fluid potentially contains PCBs. No visual indication of leakage was observed in the area of the elevator operating equipment. The hydraulic elevator units at the subject property should be inspected periodically for leakage as part of the on-going maintenance activities. If leakage is identified, the unit should be repaired, and any fluid or fluid-soaked waste should be disposed of in accordance with applicable federal, state, and local regulations.

Air Compressors: PM observed one air compressor in the mechanical room and one air compressor in a storage area in the basement. The air compressors were in good condition and staged on concrete in good condition. The storage area compressor discharge hose was not visible, and limited staining was observed on the concrete at the base of the compressor; however, the concrete floors were in good condition with no cracking, pitting, or damage observed. The mechanical room compressor discharge hose was not visible, and the compressor was marked as a back-up unit, with no staining or evidence of poor waste management practices observed in association with the compressor. Based on the observed conditions, PM has not identified the air compressors as a REC. However, PM recommends the storage area air compressor fluid be discharged to a container, and the fluid disposed of in accordance with local, state, and federal regulations.

Drums, Barrels, and/or Containers > 5-gallons: PM observed two 30-gallon partially filled degreasing cleaner drums and one 30-gallon partially filled drum (contents unknown) located in a storage area in the basement. The drums, which were staged on concrete and not stored in secondary containment, were in good condition with no evidence of leaking and/or staining observed on the drums or on the concrete floors in the vicinity of the drums. Based on the observed conditions, PM has not identified the drums as a REC. However, PM recommends the drum with unknown contents be properly characterized, and each of the drums disposed of in accordance with local, state, and federal regulations.

Sumps or Cisterns: The subject property contains a basement sump and a parking garage sump. The sumps were in good condition with no evidence of staining and/or poor waste management practices observed. Additionally, no hazardous substances and/or petroleum products were stored in the vicinity of the sumps. Based on the observed site conditions, PM has not identified the sumps as a REC.

Floor Drains, Trench Drains, etc.: PM observed floor drains in the following areas: kitchen, restrooms, mechanical room, basement, and parking garage. No staining or evidence of poor

waste management practices was observed in association with the drains. The drains likely discharge to the municipal sewer system.

Monitoring Wells: Four apparent groundwater monitoring wells were identified in the loading dock east of the subject building. The monitoring wells are flush-mounted with covers bolted to the outer casings. Visual observations noted that two of the well caps appear to be adequately secured; however, two of the well caps were missing. The monitoring wells appear to have been installed associated with previous subsurface investigations. Refer to Section 4.9.1 for additional information.

Pad or Pole Mounted Transformers and/or Capacitors: The subject property is supplied with underground secondary electrical service from three pad-mounted electrical transformers, two of which are located in the mechanical room, with one located in the southern portion of the property. The transformers are likely designated as the property of Detroit Edison (DTE), the public utility. The mechanical room transformers are labeled as "Non-PCB;" however, the outdoor transformer is not labeled regarding PCB content. No leakage of the transformers was observed at the time of the site reconnaissance.

7.1.1: Current Operations

The subject property is currently vacant and therefore there are no current business operations.

8.0 ADJOINING PROPERTIES

The following paragraphs provide information about the adjoining properties obtained during the site reconnaissance and through review of reasonably ascertainable information.

North Adjoining Property

The north adjoining property is currently occupied by Northwestern Highway/M-10 and Interstate 696 (I-696), and was historically a freeway, right-of-way, and vacant land.

East Adjoining Properties, across Lahser Road

The east adjoining property, identified as 26450 Lahser Road, is currently occupied by Marathon gasoline service station. Review of historical sources indicates the property was developed between 1940 and 1949 with a commercial building in the central portion on previously vacant land, which was demolished between 1967 and 1974 when the current gasoline service station was constructed in the southern portion. This property is identified in the regulatory database. Refer to Section 9.2 for additional information.

The east adjoining property, identified as 26400 Lahser Road, is currently occupied by One Lahser Center (multi-tenant office building). Review of historical sources indicates the property was developed between 1967 and 1972 with the current building on previously vacant land. The current building has been occupied by various offices since 1972.

The southeast adjoining property, identified as 26200 Lahser Road, is currently occupied by Two Lahser Center (multi-tenant office building). Review of historical sources indicates the property was developed between 1974 and 1975 with the current building on previously vacant land. The current building has been occupied by various offices since 1974.

South Adjoining Properties

The south adjoining property, identified as 26051 Lahser Road, is currently occupied by Great Lakes Surgical Center. Review of historical sources indicates the property was developed between 1957 and 1963 with a commercial building, which was occupied by a nursing home, and was demolished between 2000 and 2005 when the current building was constructed. The current building has been occupied by Great Lakes Surgical Center since 2009, and likely since construction. This property is identified in the regulatory database. Refer to Section 9.2 for additional information.

The south adjoining property is currently residential and was historically residential or vacant land.

West Adjoining Property

The west adjoining property, identified as 26711 Northwestern Highway, is currently occupied by a multi-tenant office building. Review of historical sources indicates the property was developed between 1967 and 1974 with the current building on previously vacant land. The current building has been occupied by various offices since 1974, and likely since construction.

9.0 REGULATORY RECORDS REVIEW

PM retained EDR to provide current regulatory database information compiled by a variety of federal and state regulatory agencies. A copy of the complete database is included in Appendix D. The following information was obtained:

Туре	Regulatory Agency Database	Approximate Minimum Search Distance (AMSD)	Number of Sites within AMSD
Federal	National Priority List (NPL) Sites	1 mile	0
Federal	Delisted National Priority List (DNPL) Sites	½ mile	0
Federal	Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Sites	½ mile	0
Federal	CERCLIS No Further Remediation Action Planned (NFRAP) Sites	½ mile	0
Federal	Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) Sites	1 mile	0
Federal	RCRA non-CORRACTS Treatment, Storage or Disposal (TSD) Sites	½ mile	0
Federal	RCRA Large Quantity Generators (LQG) Sites	subject property and adjoining properties	0
Federal	RCRA Small Quantity Generators (SQG) Sites	subject property and adjoining properties	0
Federal	RCRA Conditionally Exempt Small Quantity Generators (CESQG) Sites	subject property and adjoining properties	1
Federal	RCRA Non-Generators (NON-GEN) Sites	subject property and adjoining properties	2
Federal	Institutional Control / Engineering Control Registries	subject property	1
Federal	Environmental Response and Notification System (ERNS)	subject property	0
State & Tribal	Hazardous Waste Sites (HWS) (equivalents to NPL and CERCLIS)	1 mile	0

Туре	Regulatory Agency Database	Approximate Minimum Search Distance (AMSD)	Number of Sites within AMSD
State & Tribal	Solid Waste Facilities/Landfill Sites (SWLF)	½ mile	0
State & Tribal	Leaking Underground Storage Tank (LUST) Sites	½ mile	11
State & Tribal	Registered Underground Storage Tank (UST) Sites	subject property and adjoining properties	2
State & Tribal	Institutional Control / Engineering Control Registries	subject property	0
State & Tribal	Brownfield Sites	½ mile	1
State & Tribal	Baseline Environmental Assessment (BEA) Sites	½ mile	7
Either	Unmappable Database Listings (a.k.a. Orphan Sites)	database-dependent	0

9.1: Subject Property and Occupant Listings

The regulatory database report identified the following listings for the subject property or its known occupants on the referenced databases:

Federal-Mogul Corp. – The subject property is identified as a RCRA-CESQG of hazardous waste with no reported violations. According to the database, the property registered as a RCRA-NONGEN in 1985 and as a RCRA-CESQG in 2013, and the RCRA status is associated with the disposal of general office waste (i.e., lightbulbs, batteries, etc.). PM requested to review MDEQ records associated with the RCRA status; however, PM did not receive a response within the time constraints of this report. Review of information available online through the MDEQ Waste Data System (WDS) documents similar information as is included in the regulatory database.

Federal-Moguel World Headquarters – The subject property is also identified as an open LUST site with one reported release in 2007. Review of information available online through the MDEQ indicates the LUST is listed as closed, indicating the regulatory database may not be up to date. Refer to Section 4.9 for a summary of the LUST site investigation activities and Section 4.8 for a summary of the former UST systems.

Additionally, the subject property is listed as a NY Manifest site, which is associated with the disposal of PCB wastes in 1986. Refer to Section 4.9.1 for additional information.

Lastly, the subject property is also listed as an Activity and Land Use Limitation (AUL) site and an AIRS site. PM requested to review USEPA records associated with the AUL and AIRS listings; however, PM did not receive a response within the time constraints of this report. The listings are likely associated with ongoing site investigation activities at the subject property. Refer to Section 4.9.1 for additional information.

9.2: Adjoining and Nearby Sites

PM's review of the referenced databases also considered the potential or likelihood of contamination from adjoining and nearby sites. To evaluate which of the adjoining and nearby

sites identified in the regulatory database report present an environmental risk to the subject property, PM considered the following criteria:

- The type of database on which the site is identified.
- The topographic position of the identified site relative to the subject property.
- The direction and distance of the identified site from the subject property.
- Local soil conditions in the subject property area.
- The known or inferred groundwater flow direction in the subject property area.
- The status of the respective regulatory agency-required investigation(s) of the identified site, if any.
- Surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, rivers, lakes, and ditches) located between the identified site and the subject property.

Only those sites that are judged to present a potential environmental risk to the subject property and/or warrant additional clarification are further evaluated. Using the referenced criteria, and based upon a review of readily available information contained within the regulatory database report, PM did not identify adjoining (i.e., bordering) or nearby sites (e.g., properties within a ¼-mile radius) listed in the regulatory database report that were judged to present a potential environmental risk to the subject property, with the exception of the following:

Marathon Unit #2071 – This property is identified as 26450 Lahser Road and is the east adjoining property. Review of the regulatory database indicates this property is identified as an active UST site. According to the database, the property currently contains two 30-gallon lube oil USTs, which were installed in 1976, and two 10,000-gallon gasoline USTs and one 12,000-gallon gasoline UST, which were installed in 1991. Additionally, the property currently contains a 550-gallon used oil UST, which was installed in 1991 and is listed as temporarily out of use. PM requested to review MDEQ records associated with the USTs; however, PM did not receive a response within the time constraints of this report.

Additionally, review of the regulatory database indicates this property is identified as a closed LUST site with one reported release in 1990, which was granted closure in 1996. Review of MDEQ records indicates a LUST Closure Report was submitted in 1996. The LUST Closure Report documents groundwater analytical results from 1996 identified concentrations of methyltert-butyl ether (MTBE) above current MDEQ Part 213 Residential and Nonresidential DW criteria, which is delineated towards the subject property. All other contaminants were below current MDEQ Part 213 Risk Based Screening Levels (RBSLs) and/or laboratory method detection limits (MDLs). Based on the extensive sampling to identify contamination at the subject property associated with a former gasoline UST, delineation of contamination towards the subject property, closed LUST status, and distance of operations from the subject property (approximately 120 feet across Lahser Road). PM has not identified this property as a REC.

26200 Lahser Road – This property is identified as M-10 under Lahser Road and is the north adjoining property. Review of the regulatory database indicates this property is identified as a RCRA-NONGEN of hazardous waste with no reported violations. According to the database, the property registered as a RCRA-LQG in 1997 and as a RCRA-NONGEN in 1998. PM requested to review MDEQ records associated with the RCRA status; however, no files are available. Similarly, no information is available online through the MDEQ WDS. Based on PM's extensive experience in assessing similar properties, the RCRA status is likely associated with the one-time disposal of road construction waste materials. Based on the lack of reported RCRA violations

and one-time disposal of waste, and downgradient location of M-10 relative to the subject property, PM has not identified this property as a REC.

26500 Northwestern Highway – This property is identified as 26500 Northwestern Highway and is located within one eighth of a mile east-northeast of the subject property. Review of the regulatory database indicates this property is identified as a US Brownfields site. PM requested to review USEPA records associated with the Brownfield status; however, PM did not receive a response within the time constraints of this report. However, based on the distance of operations from the subject property (approximately 415 feet across Northwestern Highway/M-10), PM has not identified this property as a REC.

Elan Village LLC a.k.a. Elan Village – This property is identified as 26051 Lahser Road and is the south adjoining property. Review of the regulatory database indicates this property is identified as a RCRA-NONGEN of hazardous waste with no reported violations. According to the database, the property registered as a RCRA-NONGEN in 2003. PM requested to review MDEQ records associated with the RCRA listing; however, PM did not receive a response within the time constraints of this report. Based on the date of registration, the RCRA status is likely associated with UST removal activities, further discussed below.

Additionally, review of the regulatory database indicates this property is identified as a closed UST site and a closed LUST site with one reported release in 2003, which was granted closure in 2005. According to the database, the property formerly contained one 1,000-gallon diesel UST, which was removed in 2004 (installation date not included). Review of information available in PM's archives indicates a LUST Closure Report was completed in 2004. The LUST Closure Report documents a release was reported during UST removal activities. Approximately 80 cubic yards of excavated and disposed off-site. Analytical results from verification of soil remediation (BSR) samples did not identify any contaminants above laboratory MDLs, and a Tier I Closure was recommended. Additional site investigation activities were completed in 2005 to supplement requests made by the MDEQ, which identified VOCs in perched groundwater above laboratory MDLs but below current MDEQ RBSLs. Based on the closed LUST status, removal of the contaminant source, and lack of residual contamination, PM has not identified this property as a REC.

Mobil Service Station #05QGK – This property is identified as 22020 10 Mile Road. According to the database, this property is located within one eighth of a mile south of the subject property; however, PM determined this property is actually located over 2,700 feet from the subject property. Based upon this information, PM has not identified this property as a REC.

Unit #22-104 a.k.a. Sunrise Donuts – This property is identified as 26760 Lahser Road and is located within one eighth of a mile northeast of the subject property. Review of the regulatory database indicates this property is identified as a closed LUST site with one reported release in 1992, which was granted closure in 1995, and a BEA site as of 2009. Review of MDEQ records indicates a LUST Closure Report was completed in 1995. The LUST Closure Report documents soil analytical results from 1992 did not identify any contaminants above current MDEQ Part 213 RBSLs; however, since a BEA was completed in 2009, it is reasonable to assume that contamination is present at this property which exceeds MDEQ Part 213 Residential and/or Nonresidential Generic Cleanup Criteria (GCC), which may or may not be delineated towards the subject property. However, based on the distance of operations from the subject property (approximately 625 feet across Northwestern Highway/M-10), PM has not identified this property as a REC.

10.0 FINDINGS, OPINIONS AND CONCLUSIONS

10.1: De Minimis Condition

A de minimis condition, as defined in the ASTM Standard, is a condition that generally does not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not RECs or CRECs. No de minimis conditions were identified during this assessment.

10.2: Significant Data Gaps

A data gap, as defined in the ASTM Standard, is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts by the environmental professional to gather such information. The environmental professional must then determine whether these gaps are significant. PM did not identify or encounter any instances of significant data gaps during the course of this ESA.

10.3: Historical Recognized Environmental Conditions (HRECs)

An HREC, as defined in the ASTM Standard, is a past release of hazardous substances or petroleum products that has occurred in connection with the subject property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the subject property to any required controls. PM has not identified any HRECs in association with the subject property.

10.4: Controlled Recognized Environmental Conditions (CRECs)

A CREC, as defined in the ASTM Standard, is a recognized environmental condition (REC) resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following CREC was identified:

• Review of previous site investigations documents concentrations of 1,2,4-trimethylbenzene are present in groundwater slightly above current MDEQ Part 213 Residential and Nonresidential Drinking Water (DW) criteria. Although the regulatory database lists the subject property as an open LUST site, review of information available online through the MDEQ documents the status of the LUST is listed as closed, indicating the Tier I Restricted Residential Closure submitted in December 2015 was accepted, or the LUST was granted administrative closure (i.e., MDEQ did not review the 2015 Tier I Restricted Residential Closure within six months). Based upon this information and restrictive covenant institutional controls for the subject property as part of the restricted closure, PM has identified the closed LUST status as a CREC.

10.5: Recognized Environmental Conditions (RECs)

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the Office Building located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan, the property. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions connected with the property except the following:

• The subject property is a closed LUST site with one reported release in 2007. Previous site investigations document concentrations of 1,2,4-trimethylbenzene are present in groundwater slightly above current MDEQ Part 213 Residential and Nonresidential Drinking Water (DW) criteria. A Tier I Restricted Residential Closure was submitted in December 2015 with a restrictive covenant prohibiting the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose, which was likely granted within the last 30 days based on the discrepancy between regulatory database information and information available online through the MDEQ.

No adjoining and/or nearby RECs have been identified.

10.6: Recommendations

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the Office Building located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan, the property. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions connected with the property except as listed in Section 10.5 of this report.

A Tier I Restricted Residential Closure was submitted in December 2015, with a restrictive covenant prohibiting the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose, which is currently pending. If the LUST closure is denied, additional subsurface investigations may be necessary in the future. However, because the LUST closure is currently pending, no additional investigations are recommended at this time.

11.0 NON-ASTM SCOPE CONSIDERATIONS/BUSINESS ENVIRONMENTAL RISKS

PM has included a discussion of Non-ASTM Scope Considerations based upon industry standards and lender requirements. A Business Environmental Risk is defined as a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice.

Non-ASTM Item	Observations or Information		
Potential Asbestos Containing Building Materials (ACBM)	Refer to Section 4.9.1 for a summary of asbestos survey/identification activities.		
Lead Based Paint	Because portions of the building was constructed between 1965 and 1969, there is a potential that the paint at the subject property is lead-based. However, the painted surfaces were observed to be in generally good condition, the subject property is not a residential use, and there is no regulatory requirement to sample suspected lead-based painted surfaces at this time. Therefore, no samples were collected and no further action or investigation is recommended regarding suspected LBP at the subject property.		
Visual Mold or Significant Moisture Damage	PM performed a limited visual assessment for the presence of mold, conditions conducive to mold, and evidence of moisture in readily accessible interior areas of the subject property. Suspect moisture and mold were observed on multiple ceiling tiles and walls throughout the subject building. The water damage appeared to be the result of several roof leaks. PM recommends that the source of the water intrusion be determined and repaired. In addition, the impacted materials should be removed in order to alleviate the potential for future mold growth. This can be done as part of routine maintenance.		

12.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental professional* as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

LaNeicia Meyer

Senior Project Consultant

Kevin Kruszewski, P.G.

V.P. Environmental Risk Management

13.0 REFERENCES

The following published sources were utilized during completion of this Phase I ESA:

- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM, ASTM Designation E 1527-13, Published November 2013.
- Bresser's Cross-Index City Directories, Bresser's in Detroit, Michigan. City: Southfield. Years: 1954-2014.
- United States Geological Survey Division (U.S.G.S.) 7.5 Minute Topographic Map Redford, Michigan Quadrangle, 1987.
- Custom Soil Resource Report for Oakland County, Michigan, U.S. Department of Agriculture, survey area data from September 18, 2015.

In addition, PM reviewed the following previous site investigations, some of which are available from public sources.

Name of Report	Date of Report	Company that Prepared Report
Property Survey	January 20, 1988	Gabriel Environmental & Energy Services (Gabriel)
Phase I ESA	June 16, 1994	Environmental Science & Engineering, Inc.
Asbestos Operations & Maintenance (O & M) Program	April 2004	Clayton Environmental Consultants (Clayton)
Phase I ESA	June 16, 2004	BEM Systems, Inc. (BEM)
Phase II ESA	November 22, 2006	Soil and Materials Engineers, Inc. (SME)
Limited Phase II ESA	May 25, 2007	Environmental Consulting & Technology, Inc. (ECT)
LUST Closure Report	October 22, 2008	Environmental Consulting & Technology, Inc. (ECT)
Asbestos Survey Report	December 9, 2011	Performance Environmental Services, Inc. (Performance)
LUST Closure Report	July 2, 2012	Environmental Consulting & Technology, Inc. (ECT)
Short-Term Characterization Study	July 17, 2014	Environmental Consulting & Technology, Inc. (ECT)
Phase I ESA	August 25, 2014	EBI Consulting (EBI)
LUST Closure Report	December 4, 2015	Environmental Consulting & Technology, Inc. (ECT)

Figures



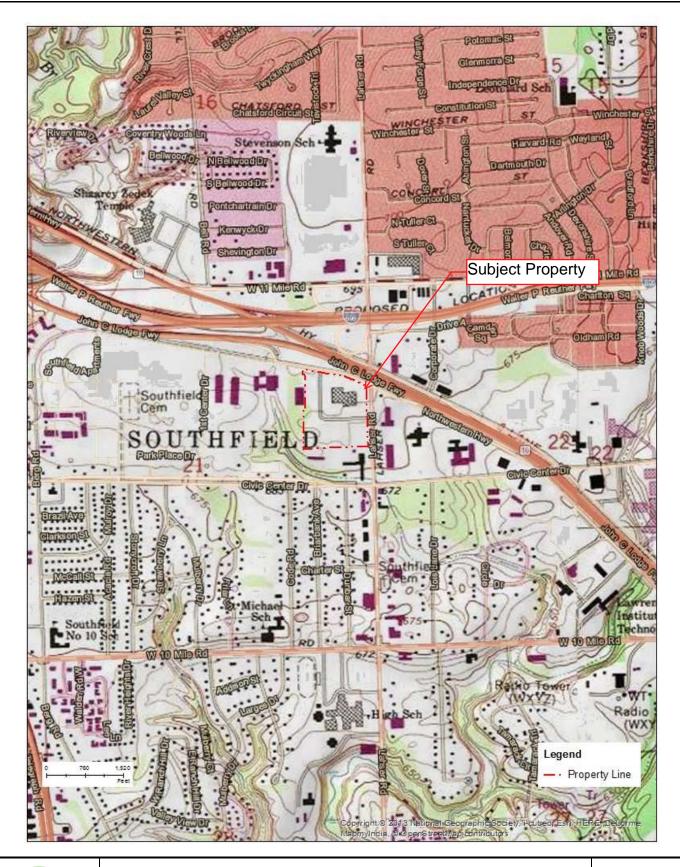




Figure 1: Site Location Map

Office Building 26555 Northwestern Highway, Southfield, Michigan PM Project No. 01-7009-0-0001

United States Geological Survey Division (U.S.G.S.) 7.5-Minute Topographic Map of the Redford, Michigan Quadrangle



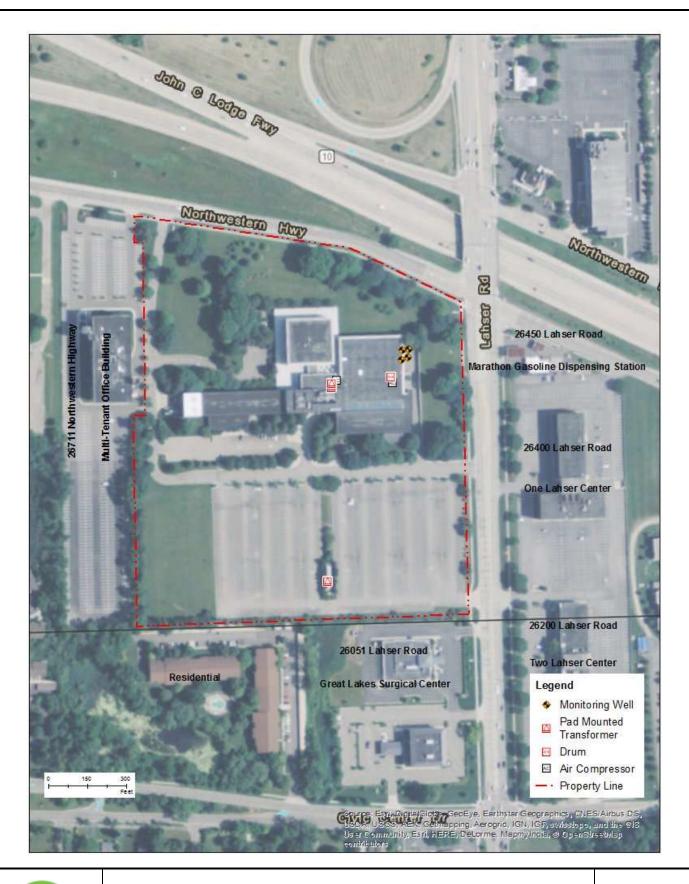
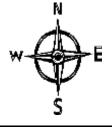


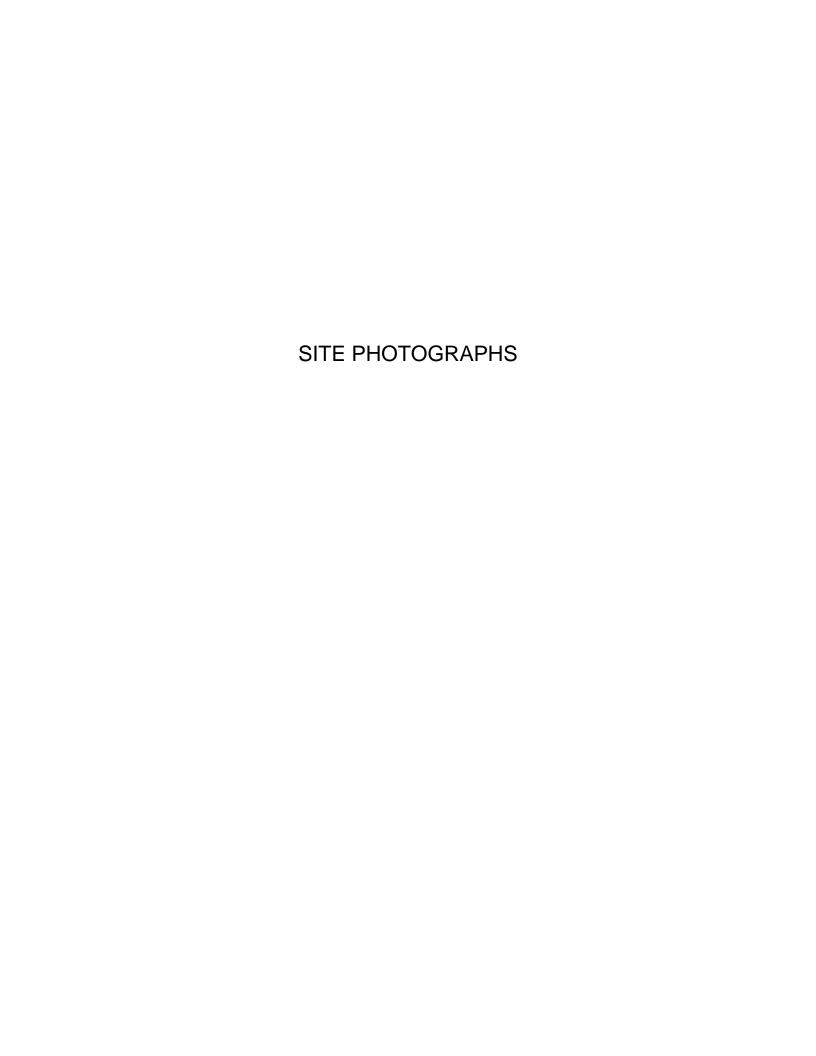


Figure 2: Generalized Diagram of the Subject Property and Surrounding Area



Appendix A







Photographs From Site Reconnaissance PM Project No. 01-7009-0-0001 Location: 26555 Northwestern Highway, Southfield, Michigan

Photograph 1



The subject property, identified as 26555 Northwestern Highway

Photograph 2



View of the northern portion of the subject property, facing east



Photographs From Site Reconnaissance PM Project No. 01-7009-0-0001 Location: 26555 Northwestern Highway, Southfield, Michigan

Photograph 3



View of the north-central portion of the subject property, facing south

Photograph 4



View of the eastern portion of the subject property, facing south



Photograph 5



View of the south-central portion of the subject property, facing north

Photograph 6



View of the southern portion of the subject property, facing west



Photograph 7



View of the west-central portion of the subject property, facing east

Photograph 8



View of the western portion of the subject property, facing south



Photograph 9



General interior view of a first floor office area

Photograph 10



General interior view of a second floor office area



Photograph 11



General interior view of a third floor office area

Photograph 12



General interior view of a fourth floor office area



Photograph 13



Interior view of the cafeteria

Photograph 14



Interior view of the kitchen



Photograph 15



Interior view of the auditorium

Photograph 16



General interior view of a conference room



Photograph 17



Interior view of the mechanical room

Photograph 18



Interior view of the parking garage



Photograph 19



General interior view of elevator equipment

Photograph 20



General interior view of an air compressor



Photograph 21



Interior view of two 30-gallon partially filed degreasing cleaner drums in a basement storage area

Photograph 22



Interior view of one 30-gallon partially filled drum (contents unknown) in a basement storage area



Photograph 23



General interior view of a sump

Photograph 24



General interior view of a floor drain



Photograph 25



View of four apparent groundwater monitoring wells in the loading dock east of the subject building

Photograph 26



General view of a pad-mounted transformer



Photograph 27



The north adjoining freeway intersection

Photograph 28



The east adjoining property, identified as 26450 Lahser Road



Photograph 29



The east adjoining property, identified as 26400 Lahser Road

Photograph 30



The southeast adjoining property, identified as 26200 Lahser Road



Photograph 31



The south adjoining property, identified as 26051 Lahser Road

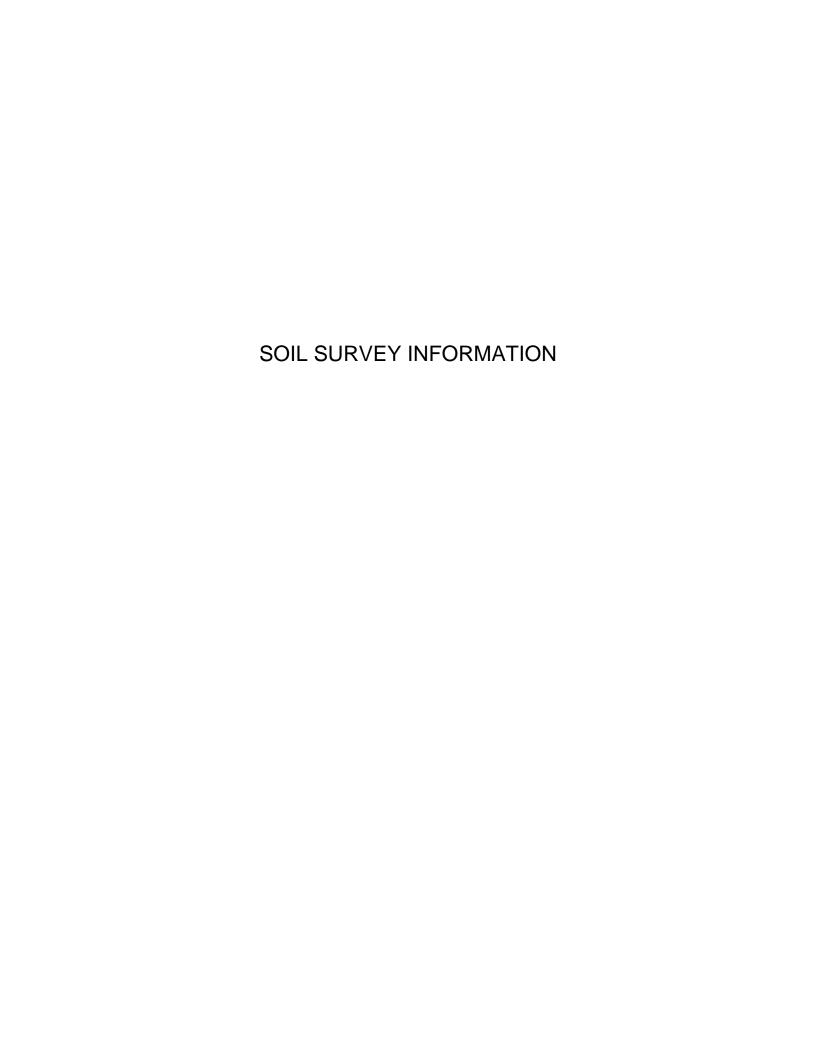
Photograph 32



The west adjoining property, identified as 26711 Northwestern Highway

Appendix B







NRCS

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Oakland County, Michigan



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND

Spoil Area

Stony Spot

Wet Spot

Other

Rails

US Routes

Major Roads

Local Roads

Ŷ

Δ

Water Features

Transportation

Background

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

A Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

w Rock Outcrop

→ Saline Spot

** Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oakland County, Michigan Survey Area Data: Version 13, Sep 18, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 14, 2012—Jun 15, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Oakland County, Michigan (MI125)								
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI					
41B	Aquents, sandy, loamy, undulating	2.5	11.5%					
59	Urban land	18.9	88.5%					
Totals for Area of Interest		21.4	100.0%					

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oakland County, Michigan

41B—Aquents, sandy, loamy, undulating

Map Unit Setting

National map unit symbol: 6bhs Elevation: 660 to 980 feet

Mean annual precipitation: 35 to 40 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 155 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Outwash plains, depressions Landform position (three-dimensional): Talf

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

H1 - 0 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches Natural drainage class: Very poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95

to 19.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None Frequency of ponding: Frequent

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: A/D

59—Urban land

Map Unit Setting

National map unit symbol: 6bjh Elevation: 660 to 980 feet

Mean annual precipitation: 35 to 40 inches

Custom Soil Resource Report

Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 155 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Qualities and Features

This folder contains tabular reports that present various soil qualities and features. The reports (tables) include all selected map units and components for each map unit. Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Soil Features

This table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage, or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial

Custom Soil Resource Report

subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Custom Soil Resource Report

Soil Features–Oakland County, Michigan									
Map symbol and soil name	Restrictive Layer			Subsidence		Potential for frost	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial	Total	action	Uncoated steel	Concrete
		Low-RV- High	Range		Low- High	Low- High			
		In	In		In	In			
41B—Aquents, sandy, loamy, undulating									
Aquents		_	_		0	_	High	Moderate	Low
59—Urban land									
Urban land		_	_		_	_			

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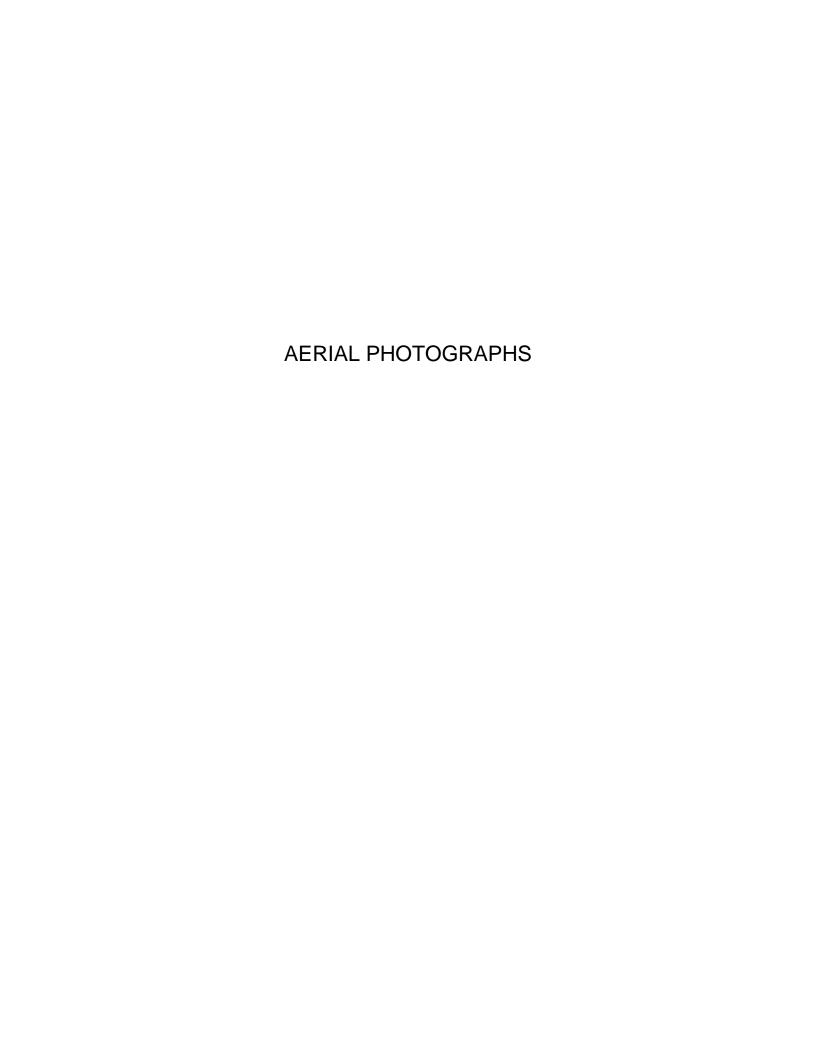
United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

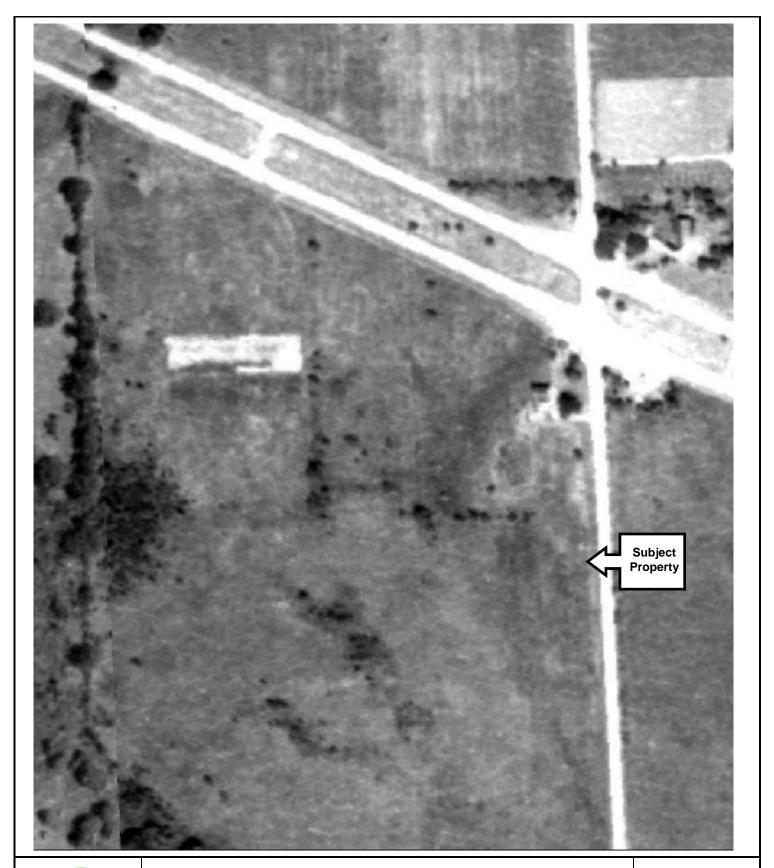
Custom Soil Resource Report

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Location: 26555 Northwestern Highway, Southfield, Michigan

PM Project No. 01-7009-0-0001

Aerial Year: 1940

Source: Oakland County Department of Equalization





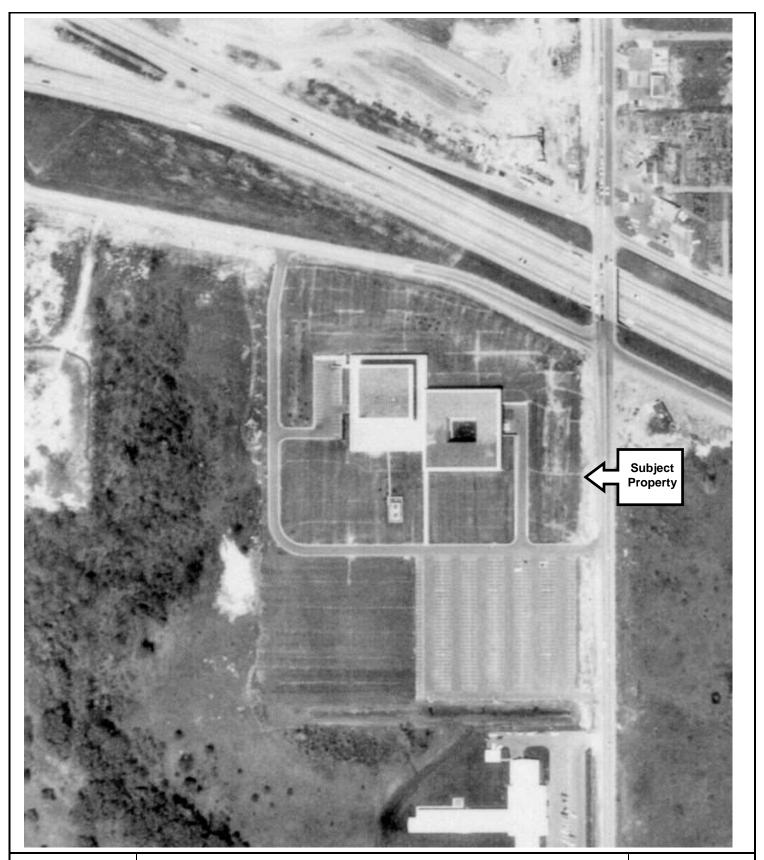


PM Project No. 01-7009-0-0001

Aerial Year: 1957

Source: Wayne State University







PM Project No. 01-7009-0-0001

Aerial Year: 1967

Source: Wayne State University





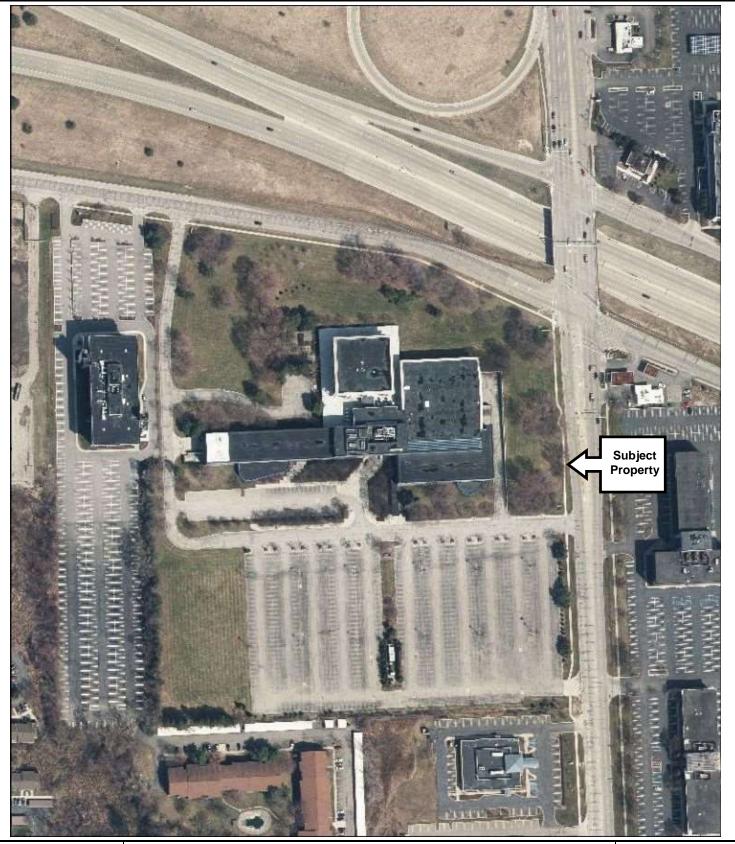


PM Project No. 01-7009-0-0001

Aerial Year: 1990

Source: Oakland County Department of Equalization





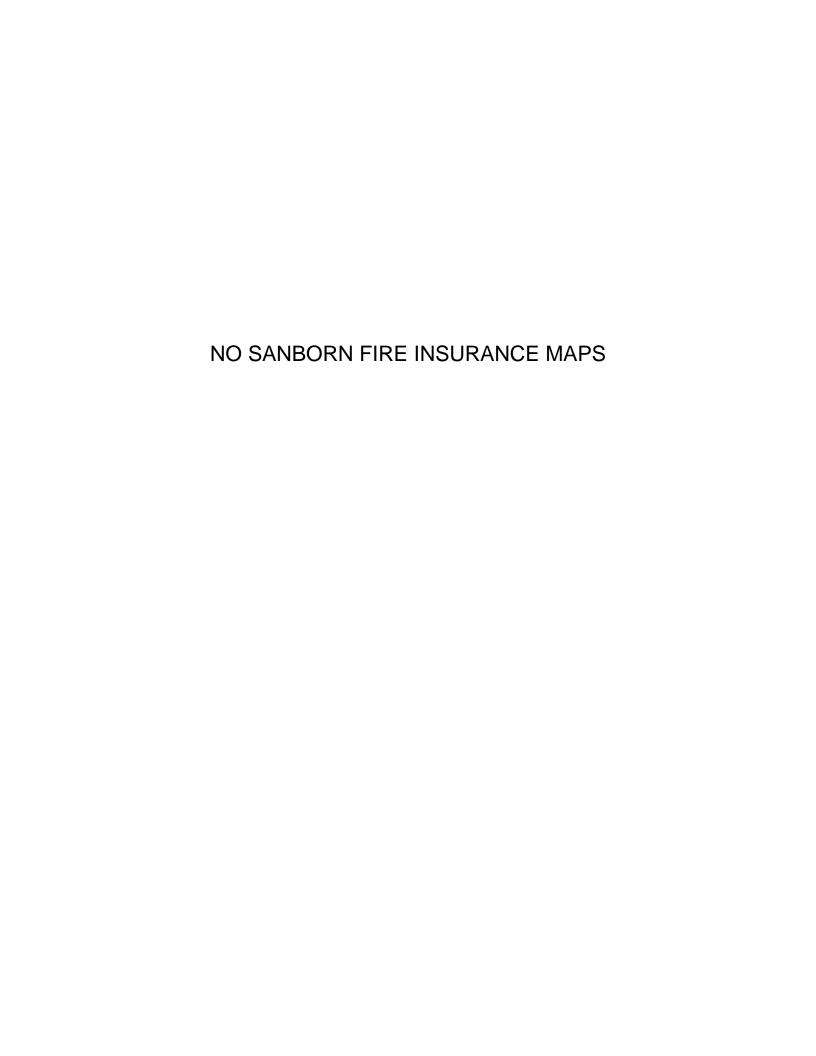


PM Project No. 01-7009-0-0001

Aerial Year: 2015

Source: Oakland County Department of Equalization





Preliminary Sanborn® Map Report

4/8/2016

Site Name: **Client Name:**

PM Environmental, Inc. 26555 Northwestern Highway 3340 Ranger Road Southfield, MI 48033 Lansing, MI 48906

Contact: Kristen King



A preliminary search of the Complete Sanborn Library collection has been conducted, and fire insurance maps covering the target property location provided by PM Environmental, Inc. were identified for the years listed below. Certified Sanborn Map search results will be provided in the final version of this report. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Preliminary Sanborn Results:

Site Name:

Address: 26555 Northwestern Highway

Southfield, MI 48033 City, State, Zip:

Cross Street:

P.O.#

01-7009-0-0001 **Project:**

Provided with final report Certification #

Maps Identified:

UNMAPPED PROPERTY

This document certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client-supplied target property information, and fire insurance maps covering the target property were not found.

Preliminary Report

This report contains the results of a preliminary search for the target property. A final EDR Sanborn Map Report will be delivered after quality review is conducted. Only a final report should be used in connection with a final site assessment.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

✓ Library of Congress

✓ University Publications of America

EDR Private Collection

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PRELIMINARY REPORT - FINAL TO FOLLOW



Grantor	Grantee	Sal Pri			Inst	Terms	of Sale	Liber &Page	Verified by	Prent
Property Address	Class: B	JSINESS	Zoni	ng: ERO	Build	ding Perm	it(s)	Date	Number	Amount
26555 NORTHWESTERN HWY	School:	Southfield	-		MISC			12/06/1999	99-01731	70,79
Owner's Name/Address FEDERAL MOGUL CORP	Hmstd	0%			MISC			07/19/1999	99-009983	84,56
ATTN: TAX DEPT P O BOX 1966	Map #:	Map #:			RENOVA	TIONS		04/29/1999	99-00126	300,00
DETROIT, MI 48235		TCV 13,690,880	(Value	Overridd	id RENOVATIONS			08/25/1998	98-01164	100,00
Legal Description-	X Impro				mates f	for Land	Table B200.CO	MMERCIAL -		
Tin, Ride, Sec 21 Part of Ne 1/4 Being Federal Mogul Bldg 'Pcl B' & Area Above 'Podium' Elev 700.70 FT Shown on Pea SURVEY AT L 10032 P 589-590 OF OCR 1.390A 2421-202-025 000000 Comments/Influences		Public Improvements				*Fa Depth From	ctors for*	Rate %Adj. Re	eason Land Value =	Value
	Sidew Water Sewer Elect Gas Curb Stree	1.01000000000								
		Topography of Site								
	Level Rolli Low High Lands Swamp Woode Pond	ng caped								
	Water Ravin	e	Year	Land Value		ilding Value	Assessed Value	Board of Review	Tribunal/ Other	Taxabl Value
	Wetla	nd Plain	2001		6,	845,440	6,845,440	6,845,440M		4,942,5
	1,1000		Control of	500 00000000000000000000000000000000000			6,502,130			4 700 2
			2000	6,502,130	201					4, 189,3
The Equalizer. Copyright (c) 1999 - 200	Who W	hen What	1999	6,502,130	26.		6,186,610			4,789,3

			111								A CONTRACTOR OF THE PARTY OF TH		
Desc. Calcul	of Bldg/Section: F lator Occupancy: Of	ederal Mogn	ing				<<<<< Class: C			culator Cost Comp ood	Percent Adj: +0	>>>>	
Class:			C	onstruct	ion Cost		Base Rat	te for	r Upper Floors - 8	6.05			
Storie	Area: 149,731 es Above Grd: 3 ge Sty Hght : 15 Wall Eght :	High		ove Ave.	Ave.	X Low	Elevator	r Adji	system: Package I	to upper floors r	ate) Cost/Sq.Ft	0.00 100W .: -2.15	
Depr. Effect Physic Func.	Ouality: Good Adj: %+0 \$/\$qFt:0.00 Depr. Table : 1.75% Heat#1: Package Heating & Cooling 100% Effective Age : 19 Physical %Good: 71 Func. %Good : 100 Economic %Good: 100 Has Elevators:				0% 3 Stori Average Ave. Fl Refined	Adjusted Square Foot Cost for Upper Floors = 83.90 3 Stories Average Height per Story: 15 Ave. Floor Area: 49,910 Refined Square Foot Cost for Upper Floors: 80.80 Number of Stories Multiplier: 1.000 Height per Story Multiplier: 0.900 Refined Square Foot Cost for Upper Floors: 80.80							
1981	Year Built Remodeled	Area:		ment Inf	0 ***			County Multiplier: 1.17, Final Square Foot Cost for Upper Floors - 94.53 Total Floor Area: 149,731 Base Cost New of Upper Floors - 14,154,217					
45	Overall Bldg Beight	Perimeter Type: Heat: Hot	ot Water, Radiant Floor				149,731	1 Sq.1	Ft. of Sprinklers		y Mult.:1.17 Cost Ne		
Comments: * Mezzanine Info * Area #1:			Effectiv	re Age	e: 19 Physical/	Functional/Econor	ction/Replacement Cost mic/Overall %Good: 71 Total Depreciated Cos	/100/100/ 71					
	Type #1: Area #2: Type #2:				E.C.F. = 1.000 Estimated True Cash Value of Building 1 = 10,292,038 Replacement Cost/Floor Area = 96.81 Est. TCV/Floor Area = 68.74								
	* Sprinkler Info * Area: 149731 Type: Good												
(1) E	Excavation/Site Pre	p:		(7) In	terior:			(1	1) Electric and L	ighting:	(39) Miscellaneous:		
(2) F	oundation:	Footings		(8) Pl:	umbing:								
N Pour	red Conc. Brick/S	Stone B	lock	Mang		Average			Outlets:	Fixtures:			
				200000	ve Ave.	Typical			Few Average Many	Few Average Many			
(3) F	Tame:			2-P	iece Baths lece Baths		Heaters		Typical Unfinished	Typical Unfinished			
					wer Stalls lets		Fountains Softeners		Flex Conduit Rigid Conduit	Incandescent Fluorescent	(40) Exterior Wall: Thickness	Bsmnt Insul.	
(4) E	loor Structure:								Armored Cable Non-Metalic Bus Duct	Mercury Sodium Vapor Transformer			
				(9) Sp:	rinklers:			(1	3) Roof Structure	September 1997			
(5) F	Cloor Cover:		1	(10) He	eating and C	cooling:							
				Gas Oil	Coal Stoker	Hand Fi Boiler	red —	(1	4) Roof Cover:				
(6) 0	Ceiling:												
											The same of the sa		

Parcel Number: 76-24-21-202-030 Jur	isdiction: Un	it '24'		Count	y: O	AKLAND			Printed on 0	9/06/2001
Grantor G	rantee Sale Pric				Inst Type	Terms	of Sale	Liber &Page	Verified by	Prent Trans
Property Address	Class: Busin	ess Vacant	Zoni	ng: ERO	Buil	ding Perm	it(s)	Date	Number	Amount
NORTHWESTERN HWY	School: Sout	hfield	-						19 30 7 7 3	
- Owner's Name/Address	Hmstd 0%						/ 13.			
NTTN: TAX DEPT O BOX 1966	Map #:									
DETROIT, MI 48235	2002 Est TCV	3,077,540{	Value (verridde						
Legal Description	Improved	X Vacant	- Land	Value Esti	nates :			mmercial vacan		
TIN,RIOE,SEC 21 PART OF NE 1/4 BEG AT PT DIST N 01-55-30 W 584.73 FT 4 S 88-04-30 W 60 FT FROM E 1/4 COR, TH S 88-04-30 W 946.51 FT, TH N 01-08-18 W 597.35 FT, TH N 88-51-42 E 31 FT, TH N 01-08-18 W 490 FT, TH S 88-51-42 W 17 FT TH N 01-08-18 W 72.44 FT, TH S 80-46-00 E 655.65 FT, TH S 64-47-03 E 307.15 FT TH S 01-55-30 E 892.50 FT TO BEG, EXC BEG AT PT DIST N 01-55-30 W 1112.20 FT 6 S 88-03-46 W 19.52 FT, TH ALG CURVE TO RIGHT, RAD 28.26 FT, CHORD BEARS N 75-56-14 W 54.33 FT, DIST OF 73 FT, TH N 01-56-14 W 1.58 FT, TH S 88-03-46 W 134.65 FT, TH S 88-03-46 W	Imp:		ription From		Depth From T 849	ctors for* stage Depth 420 SqFt Total Acres	Rate %Adj. Re 6.00 100 Total Est.	ason Land Value =	Value 5,096,520 5,096,520	
	Gravel Road Paved Road Storm Sewer Sidewalk Water Sewer Electric Gas Curb Street Lights Standard Utilities Underground Utils.									
5.22 FT, TH N 01-56-14 W 136.10 FT, TH S 8-03-46 W 228.67 FT, TH S 01-56-14 E .10 FT, TH ALG CURVE TO RIGHT, RAD 22 FT CHORD BEARS S 37-03-46 W 27.70 FT. DIST		graphy Site								
CHORD BEARS S 37-03-46 W 27.70 FT, DIST OF 29.96 FT, TH S 76-03-46 W 73.61 FT, TH	Level Rolling Low High Landscape Swamp Wooded	d								
	Pond Waterfrom Ravine	it	Year	Land Value	Bu	uilding Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
	Wetland Flood Pla	in	2002	1,538,770			1,538,770			1,110,84
		27/74500	2001	1,538,770			1,538,770	1,538,770M		1,110,84
	Who When	What	processor to	1/1 /02/0 2084	50		1 451 500			4 444 46
The Equalizer. Copyright (c) 1999 - 2000.				1,461,600			1,461,600			1,076,40

Desc. o	Desc. of Bldg/Section: Federal Mogul Calculator Occupancy: Office Building					<<<<< Class:		Calc Quality: Go		r Cost Comp	utations Percent Adj: +0	>>>>		
Floor A Stories Average Bsmnt W					+0.00	Bsmnt Heating system: Package Heating & Cooling Cost/SqFt: 7.05 Elevator Adjustment (Applied to upper floors rate) Cost/Sq.Ft.: -2.15 Adjusted Square Foot Cost for Upper Floors = 83.90						0.00 100% 7.05		
Effecti Physica Func. & Economi 1967 1999	Heat#2: Package Heating & Cooling Physical *Good: 56 Punc. *Good: 100 Punc					Adjusted Square Foot Cost for Basement = 30.85 4 Stories Average Height per Story: 14 Ave. Floor Area: 17,172 Basement Area: 19,872 Basement Height: 0 Refined Square Foot Cost for Upper Floors: 81.79 Refined Square Foot Cost for Upper Floors: 81.79 Refined Square Foot Cost for Basement: 25.19 County Multiplier: 1.12, Final Square Foot Cost for Upper Floors = 91.60 for Basement = 28.22 Total Floor Area: 68,688 Base Cost New of Upper Floors = 6,292,01 Basement Area: 19,872 Base Cost New of Dpper Floors = 560,74 68,688 Sq.Ft. of Sprinklers 8 2.06, County Mult::1.12 Cost New = 158,47 Computations Too Long. Print on separate sheet. Estimated True Cash Value of Bullding 1 = 3,926,29 Replacement Cost/Floor Area= 102.07 Estimated True Cash Value of Bullding 1 = 3,926,29 Replacement Cost/Floor Area= 102.07 Estimated True Cash Value of Bullding 1 = 3,926,29								
(1) Ex	ccavation/Site Pro	p:	(*)) Inter	rior:					(11) Electric and L	ighti	ng:	(39) Miscellaneous	
(2) Fo	oundation:	Footings	- (1) Plumb	nings			Outlets: Fixtures:						
X Poure	ed Conc. Brick/	Stone Blo	ock		Fixtures	Ty	erage pical Urinals		OR I	Few Average Many	A)	verage iny ypical		
(3) Frame:			3-Piece Baths 2-Piece Baths Shower Stalls Wash F			Water I	Heaters Fountains Softeners		Typical Unfinished Flex Conduit Rigid Conduit Armored Cable	Di E	nfinished ncandescent luorescent ercury odium Vapor	(40) Exterior Wall Thickness	Remot Insul.	
(4) F	(4) Floor Structure: (9) Sprinklers:		Bu		i	Non-Metalic Bus Duct (13) Roof Structure	7	ransformer Slope-0						
(5) F	loor Cover:		-	(O) Hea	ting and	Cooli	ngı							
				Gas Oll	Coal Stoker		and Fire	#d —		(14) Roof Cover:				
(6) 0	eilings													

Desc. of Bldg/Section: Calculator Occupancy: Of		1977.9		<<<<< Class: C		ulator Cost Compu od	tations Percent Adj: +	>>>>		
Calculator Occupancy: Office Building Class: C Floor Area: 91.742 Stories Above Grd: 3 Average Sty Hight: 14 Bsmnt Wall Hight: Depr. Table: 1.75% Effective Age: 31 Physical %Good: 58 Func. %Good: 100 Economic %Good: 100 Economic %Good: 100 Economic %Good: 100 1959 Year Built 1961 Remodeled 42 Overall Bldg Height Comments: Comments: Comments: Construction Cost Ave. X Low ** ** Calculator Cost Data ** ** Quality: Good Adj: %+0 \$/Sqft:0.00 ##eat#1: Package Heating & Cooling Ave. Sqft/Story: 30581 Ave. Sqft/Story: 30581 Ave. Perimeter: 698 Has Elevators: *** Basement Info *** Area: 19872 Perimeter: 698 Type: Unfinished/Storage/Utility Heat: Package Heating & Cooling * Mezzanine Info * Area #1: Type #1: Area #2: Type #2: ** Sprinkler Info * Area: 91242 Type: Good					Base Rate for Upper Floors = 86.05 Unfinished/Storage/Utility Basement, Base Rate for Basement = 23.80 (10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 10 Bsmnt Heating system: Package Heating & Cooling Cost/SqFt: 7.05					
(1) Excavation/Site Pre	p: Footings	(7) Inter				(11) Electric and Li	ghting:	(39) Miscellaneou	31	
M Poured Conc. Brick/S	Stone Block	Above Ave. Typical Total Fixtures Urinals 3-Piece Baths Wash Bo 2-Piece Baths Water H Shower Stalls Wash Fo		Urinals Wash Bo Water H Wash Fo	wis	Few Average Many Typical Unfinished	Few Average Many Typical Unfiniahed	(40) Exterior Wal	l:	
(4) Floor Structure: (5) Floor Cover:	(9) Sprinklers: (10) Heating and Cooling: Gas Coal Hand Fire			ed —	Rigid Conduit Armored Cable Non-Metalic Bus Duct (13) Roof Structure: Slope		Interness			
(6) Ceiling:		200000000000000000000000000000000000000	Stoker	Boiler		(14) Roof Cover:				

26555 NORTHWESTERN HWY SOUTHFIELD, MI 48033 (Property Address)

Parcel Number: 76-24-21-202-027



Property Owner: LEX SOUTHFIELD II LP

Summary Information

- > Commercial/Industrial Building Summary
 - Yr Built: 1981 - # of Buildings: 1
 - Total Sq.Ft.: 149,731
- > Property Tax Information found
- > Assessed Value: \$1,183,860 | Taxable Value: \$1,183,860
- > 57 Building Department records found across 7 properties

Owner and Taxpayer Information

LEX SOUTHFIELD II LP Owner 1 PENN PLZ STE 4015 NEW YORK, NY 10119 **Taxpayer**

SEE OWNER INFORMATION

General Information for Tax Year 2016

Property Class	201-BUSINESS IMPROVED	Unit	76 CITY OF SOUTHFIELD
School District	Southfield	Assessed Value	\$1,183,860
MAP#	Not Available	Taxable Value	\$1,183,860
USER NUM IDX	0	State Equalized Value	\$1,183,860
USER ALPHA 1	Not Available	Date of Last Name Change	Not Available
USER ALPHA 3	Not Available	Notes	Not Available
Historical District	Not Available	Census Block Group	Not Available
IISER ALPHA 2	Not Available	•	

Principal Residence Exemption Information

Homestead Date	Not Available

Principal Residence Exemption	June 1st	Final
2016	0.0000 %	-
2015	0.0000 %	0.0000 %

Previous Year Information

Year	MBOR Assessed	Final SEV	Final Taxable
2015	\$1,961,150	\$1,961,150	\$1,961,150
2014	\$2,031,850	\$2,031,850	\$2,031,850
2013	\$2,004,140	\$2,004,140	\$2,004,140

Land Information

Zoning Code	Not Available	Total Acres	1.390
Land Value	\$363,290	Land Improvements	\$0
Renaissance Zone	No	Renaissance Zone Expiration	Not Available
		Date	
ECF Neighborhood	2560 OFFICE 100,000-200,000 S	. Mortgage Code	Not Available
Lot Dimensions/Comments	Not Available	Neighborhood Enterprise	No
		Zone	
ı		ı	
Lot(s)		Frontage	

Depth

No lots found.

Total Frontage: 0.00 ft Average Depth: 0.00 ft

Legal Description

T1N, R10E, SEC 21 PART OF NE 1/4 BEG AT PT DIST N 01-55-30 W 1112.20 FT & S 88-03-46 W 218.12 FT FROM E 1/4 COR, TH S 88-03-46 W 13.28 FT, TH S 30-03-46 W 19.52 FT, TH ALG CURVE TO RIGHT, RAD 28.26 FT, CHORD BEARS N 75-56-14 W 54.33 FT, DIST OF 73 FT, TH N 01-56-14 W 1.58 FT, TH S 88-03-46 W 134.65 FT, TH S 01-56-14 E 72.10 FT, TH S 88-03-46 W 15.22 FT, TH N 01-56-14 W 136.10 FT, TH S 88-03-46 W 228.67 FT, TH S 01-56-14 E 3.10 FT, TH ALG CURVE TO RIGHT, RAD 22 FT, CHORD BEARS S 37-03-46 W 27.70 FT, DIST OF 29.96 FT, TH S 76-03-46 W 73.61 FT, TH ALG CURVE TO RIGHT, RAD 22 FT, CHORD BEARS

N 52-56-14 W 34.19 FT, DIST OF 39.17 FT, TH N 01-56-14 W 18.41 FT, TH S 88-03-46 W 75.90 FT, TH N 01-56-14 W 27.90 FT, TH S 88-03-46 W 37.00 FT, TH N 01-56-14 W 39.90 FT, TH N 88-03-46 E 308.90 FT, TH N 01-56-14 W 8.10 FT, TH N 88-03-46 E 180.58 FT, TH S 01-56-14 E 48.42 FT, TH N 88-03-46 E 167.84 FT, TH N 01-56-14 W 19.93 FT, TH N 88-03-46 E 12.70 FT, TH N 01-56-14 W 10.92 FT, TH N 88-03-46 E 13.28 FT, TH S 01-56-14 E 68.43 FT, TH N 88-03-46 E 7.59 FT, TH S 01-56-14 E 15.83 FT, TH ALG CURVE TO RIGHT, RAD 16.30 FT, CHORD BEARS S 14-03-46 W 8.99 FT, DIST OF 9.10 FT, TH S 30-03-46 W 9.65 FT, TH S 01-56-24 E 21.25 FT TO BEG, ALSO AREA ABOVE PODIUM FLOOR ELEV 700.60 DESC AS BEG AT PT DIST N 01-55-30 W 1112.20 FT & S 88-03-46 W 218.12 FT & S 88-03-46 W 13.28 FT & S 30-03-46 W 19.52 FT & N 75-56-14 W 54.33 FT & N 01-56-14 W 1.58 FT & S 88-03-46 W 134.65 FT & S 01-56-14 E 72.10 FT & S 88-03-46 W 15.22 FT & N 01-56-14 W 136.10 FT & S 88-03-46 W 228.67 FT & S 01-56-14 E 3.10 FT & S 37-03-46 W 27.70 FT & S 76-03-46 W 73.61 FT & N 52-56-14 W 34.19 FT & N 01-56-14 W 18.41 FT & S 88-03-46 W 75.90 FT & N 01-56-14 W 27.90 FT & S 88-03-46 W 37 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 88-03-4 56-14 W 8.10 FT & N 88-03-46 E 64.10 FT FROM E 1/4 COR, TH N 01-56-14 W 33.40 FT, TH N 88-03-46 E 24 FT, TH N 01-56-14 W 27.33 FT, TH N 88-03-46 E 27.80 FT, TH S 01-56-14 E 27.33 FT, TH N 88-03-46 E 48 FT, TH S 01-56-14 E 10 FT, TH N 88-03-46 E 16.68 FT, TH S 01-56-14 E 23.40 FT, TH S 88-03-46 W 116.48 FT TO BEG 1.53 A 10-10-08 CORR OLD DESCRIPTION: T1N, R10E, SEC 21 PART OF NE 1/4 BEING FEDERAL MOGUL BLDG 'PCL B' & AREA ABOVE 'PODIUM' ELEV 700.70 FT SHOWN ON PEA SURVEY AT L 10032 P 589-590 OF OCR 1.390A 2421-202-027

Land Division Act Information

Date of Last Split/Combine	Not Available	Number of Splits Left	0
Date Form Filed	Not Available	Unallocated Div.s of Parent	0
Date Created	Not Available	Unallocated Div.s Transferred	0
Acreage of Parent	0.00	Rights Were Transferred	Not Available
Split Number	0	Courtesy Split	Not Available
Parent Parcel	Not Available		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
04/16/2015	\$100.00	CD	NORTHWESTERN ASSOC LTD PTNSHP	LEX SOUTHFIELD II LP	FORCED SALE	48162/451

Building Information - 149731.00 sq ft Office Building (Commercial)

Floor Area	149,731 sq ft	Estimated TCV	\$2,004,424
Occupancy	Office Building	Class	С
Stories Above Ground	3	Average Story Height	15 ft
Basement Wall Height	Not Available		
Year Built	1981	Year Remodeled	Not Available
Percent Complete	100%	Heat	Package Heating & Cooling
Physical Percent Good	49%	Functional Percent Good	90%
Economic Percent Good	45%	Effective Age	31 yrs

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NORTHWESTERN HWY SOUTHFIELD, MI 48033 (Property Address)

Parcel Number: 76-24-21-202-030



Property Owner: FEDERAL MOGUL CORP

Summary Information

- > Assessed Value: \$2,123,550 | Taxable Value: \$1,192,820 > Property Tax Information found
- > Building Department Information found

Owner and Taxpayer Information

FEDERAL MOGUL CORP Owner

1 PENN PLZ STE 4015 NEW YORK, NY 10119 **Taxpayer**

SEE OWNER INFORMATION

General Information for Tax Year 2016

Property Class	202-BUSINESS VACANT	Unit	76 CITY OF SOUTHFIELD
School District	Southfield	Assessed Value	\$2,123,550
MAP #	Not Available	Taxable Value	\$1,192,820
USER NUM IDX	0	State Equalized Value	\$2,123,550
USER ALPHA 1	Not Available	Date of Last Name Change	Not Available
USER ALPHA 3	Not Available	Notes	Not Available
Historical District	Not Available	Census Block Group	Not Available
USER ALPHA 2	Not Available	·	

Principal Residence Exemption Information

Homestead Date	Not Available

Principal Residence Exemption	June 1st	Final
2017	0.0000 %	-
2016	0.0000 %	0.0000 %

Previous Year Information

Year	MBOR Assessed	Final SEV	Final Taxable
2015	\$2,548,260	\$2,548,260	\$1,189,260
2014	\$2,548,260	\$2,548,260	\$1,170,540
2013	\$2,548,260	\$2,548,260	\$1,152,110

Land Information

Zoning Code	Not Available	Total Acres	19.500
Land Value	\$4,247,100	Land Improvements	\$0
Renaissance Zone	No	Renaissance Zone Expiration	Not Available
		Date	
ECF Neighborhood	2800 COMMERCIAL, VACANT	Mortgage Code	Not Available
Lot Dimensions/Comments	Not Available	Neighborhood Enterprise	No
		Zone	

Frontage Lot(s) Depth

No lots found.

Total Frontage: 0.00 ft Average Depth: 0.00 ft

Legal Description

T1N,R10E,SEC 21 PART OF NE 1/4 BEG AT PT DIST N 01-55-30 W 584.73 FT & S 88-04-30 W 60 FT FROM E 1/4 COR, TH S 88-04-30 W 946.51 FT, TH N 01-08-18 W 597.35 FT, TH N 88-51-42 E 31 FT, TH N 01-08-18 W 490 FT, TH S 88-51-42 W 17 FT TH N 01-08-18 W 72.44 FT, TH S 80-46-00 E 655.65 FT, TH S 64-47-03 E 307.15 FT TH S 01-55-30 E 892.50 FT TO BEG, EXC BEG AT PT DIST N 01-55-30 W 1112.20 FT & S 88-03-46 W 218.12 FT FROM E 1/4 COR, 000000 TH S 88-03-46 W 13.28 FT, TH S 30-03-46 W 19.52 FT, TH ALG CURVE TO RIGHT, RAD 28.26 FT, CHORD BEARS N 75-56-14 W 54.33 FT, DIST OF 73 FT, TH N 01-56-14 W 1.58 FT, TH S 88-03-46 W 134.65 FT, TH S 01-56-14 E 72.10 FT, TH S 88-03-46 W 15.22 FT, TH N 01-56-14 W 136.10 FT, TH S 88-03-46 W 228.67 FT, TH S 01-56-14 E 3.10 FT, TH ALG CURVE TO RIGHT, RAD 22 FT, CHORD BEARS S 37-03-46 W 27.70 FT, DIST OF 29.96 FT, TH S 76-03-46 W 73.61 FT, TH ALG CURVE TO RIGHT RAD 22 FT, CHORD BEARS N 52-56-14 W 34.19 FT, DIST OF 39.17 FT, TH N 01-56-14 W 18.41 FT, TH S 88-03-46 W 75.90 FT, TH N 01-56-14 W 27.90 FT, TH S 88-03-46 W 37 FT, TH N 01-56-14 W 39.90 FT, TH N 88-03-46 E 308.90 FT, TH N 01-56-14 W 8.10 FT, TH N 88-03-46 E 5.25 FT, TH N 01-56-14 W 215.61 FT, TH N 88-03-46 E 168.66 FT, TH S 01-56-14 E 83.94 FT, TH N 88-03-46 E 174.51 FT, TH S 01-56-14 E 160.16 FT, TH N 88-03-46 E 12.70 FT, TH N 01-56-14-W 10.92 FT, TH N 88-03-46 E 13.28 FT, TH S 01-56-14 E 68.43 FT, TH N 88-03-46 E 7.59 FT, TH S 01-56-14 E 15.83 FT, TH ALG CURVE TO RIGHT, RAD 16.30 FT, CHORD BEARS S 14-03-46 W 8.99 FT, DIST OF 9.10 FT, TH S 30-03-46 W 9.65 FT, TH S 01-56-14 E 21.25 FT TO BEG 19.500A

Land Division Act Information

Date of Last Split/Combine	Not Available	Number of Splits Left	0
Date Form Filed	Not Available	Unallocated Div.s of Parent	0
Date Created	Not Available	Unallocated Div.s Transferred	0
Acreage of Parent	0.00	Rights Were Transferred	Not Available
Split Number	0	Courtesy Split	Not Available
Parent Parcel	Not Available		

Sale History

Sale Date	Sale Price Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
No sales history fo	ound.				

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26555 NORTHWESTERN HWY SOUTHFIELD, MI 48033 (Property Address)

Parcel Number: 76-24-21-202-031



Item 1 of 3 3 Images / 0 Sketches

Property Owner: FEDERAL MOGUL CORP

Summary Information

- > Commercial/Industrial Building Summary
 - Yr Built: 1967 - # of Buildings: 2
 - Total Sq.Ft.: 160,430
- > Property Tax Information found
- > Assessed Value: \$1,473,900 | Taxable Value: \$1,473,900
- > 58 Building Department records found across 1 property

Owner and Taxpayer Information

FEDERAL MOGUL CORP Owner 1 PENN PLZ STE 4015 NEW YORK, NY 10119

Taxpayer

SEE OWNER INFORMATION

General Information for Tax Year 2016

Property Class	201-BUSINESS IMPROVED	Unit	76 CITY OF SOUTHFIELD
School District	Southfield	Assessed Value	\$1,473,900
MAP#	Not Available	Taxable Value	\$1,473,900
USER NUM IDX	0	State Equalized Value	\$1,473,900
USER ALPHA 1	Not Available	Date of Last Name Change	Not Available
USER ALPHA 3	Not Available	Notes	Not Available
Historical District	Not Available	Census Block Group	Not Available
IISER AI PHA 2	Not Available	•	

Principal Residence Exemption Information

Homestead Date	Not Available

Principal Residence Exemption	June 1st	Final
2016	0.0000 %	-
2015	0.0000 %	0.0000 %

Previous Year Information

Year	MBOR Assessed	Final SEV	Final Taxable
2015	\$2,239,610	\$2,239,610	\$2,239,610
2014	\$2,264,170	\$2,264,170	\$2,264,170
2013	\$2,242,990	\$2,242,990	\$2,242,990

Land Information

Land Value \$509,652 Land Improvements \$0 Renaissance Zone No Renaissance Zone Expiration Date Not Available ECF Neighborhood 2560 OFFICE 100,000-200,000 S. Mortgage Code Not Available
Date ECF Neighborhood 2560 OFFICE 100,000-200,000 S.Mortgage Code Not Available
ECF Neighborhood 2560 OFFICE 100,000-200,000 S. Mortgage Code Not Available
Lot Dimensions/Comments Not Available Neighborhood Enterprise No
Zone
Lot(s) Frontage

No lots found.

Total Frontage: 0.00 ft Average Depth: 0.00 ft

Legal Description

T1N,R10E,SEC 21 PART OF NE 1/4 BEG AT PT DIST N 01-55-30 W 1203.68 FT & S 88-03-46 W 244.11 FT FROM E 1/4 COR, TH S 88-03-46 W 167.84 FT, TH N 01-56-14 W 48.42 FT, TH S 88-03-46 W 175.33 FT, TH N 01-56-14 W 215.61 FT, TH N 88-03-46 E 168.66 FT, TH S 01-56-14 E 83.94 FT, TH N 88-03-46 E 174.51 FT, TH S 01-56-14 E 180.09 FT, TO BEG, EXC BEG AT PT DIST N 01-55-30 W 1112.20 FT & S 88-03-46 W 218.12 FT & S 88-03-46 W 13.28 FT & S 30-03-46 W 19.52 FT & 000000 N 75-56-14 W 54.33 FT & N 01-56-14 W 1.58 FT & S 88-03-46 W 134.56 FT & S 01-56-14 E 72.10 FT & S 88-03-46 W 15.22 FT & N 01-56-14 W 136.10 FT

Depth

& S 88-03-46 W 228.67 FT & S 01-56-14 E 3.10 FT & S 37-03-46 W 27.70 FT & S 76-03-46 W 73.61 FT & N 52-56-14 W 34.19 FT & N 01-56-14 W 18.41 FT & S 88-03-46 W 27.70 FT & S 88 03-46 W 75.90 FT & N 01-56-14 W 27.90 FT & S 88-03-46 W 37 FT & N 01-56-14 W 39.90 FT & N 88-03-46 E 308.90 FT & N 01-56-14 W 8.10 FT & N 88-03-46 E 64.10 FT FROM E 1/4 COR, TH N 01-56-14 W 33.40 FT, TH N 88-03-46 E 24 FT, TH N 01-56-14 W 27.33 FT, TH N 88-03-46 E 27.80 FT, TH S 01-56-14 E 27.33 FT, TH N 88-03-46 E 48 FT, TH S 01-56-14 E 10 FT, TH N 88-03-46 E 16.68 FT TH S 01-56-14 E 23.40 FT TH S 88-03-46 W 116.48 FT TO BEG 1.450A

Land Division Act Information

Date of Last Split/Combine	Not Available	Number of Splits Left	0
Date Form Filed	Not Available	Unallocated Div.s of Parent	0
Date Created	Not Available	Unallocated Div.s Transferred	0
Acreage of Parent	0.00	Rights Were Transferred	Not Available
Split Number	0	Courtesy Split	Not Available
Parent Parcel	Not Available		

Sale History

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms of Sale	Liber/Page
No sales history fo	ound.					

Building Information - 68688.00 sq ft Office Building (Commercial)

Floor Area	68,688 sq ft	Estimated TCV	\$1,001,601
Occupancy	Office Building	Class	С
Stories Above Ground	4	Average Story Height	14 ft
Basement Wall Height	Not Available		
Year Built	1967	Year Remodeled	1999
Percent Complete	100%	Heat	Forced Air Furnace
Physical Percent Good	37%	Functional Percent Good	90%
Economic Percent Good	65%	Effective Age	46 yrs

Building Information - 91742.00 sq ft Office Building (Commercial)

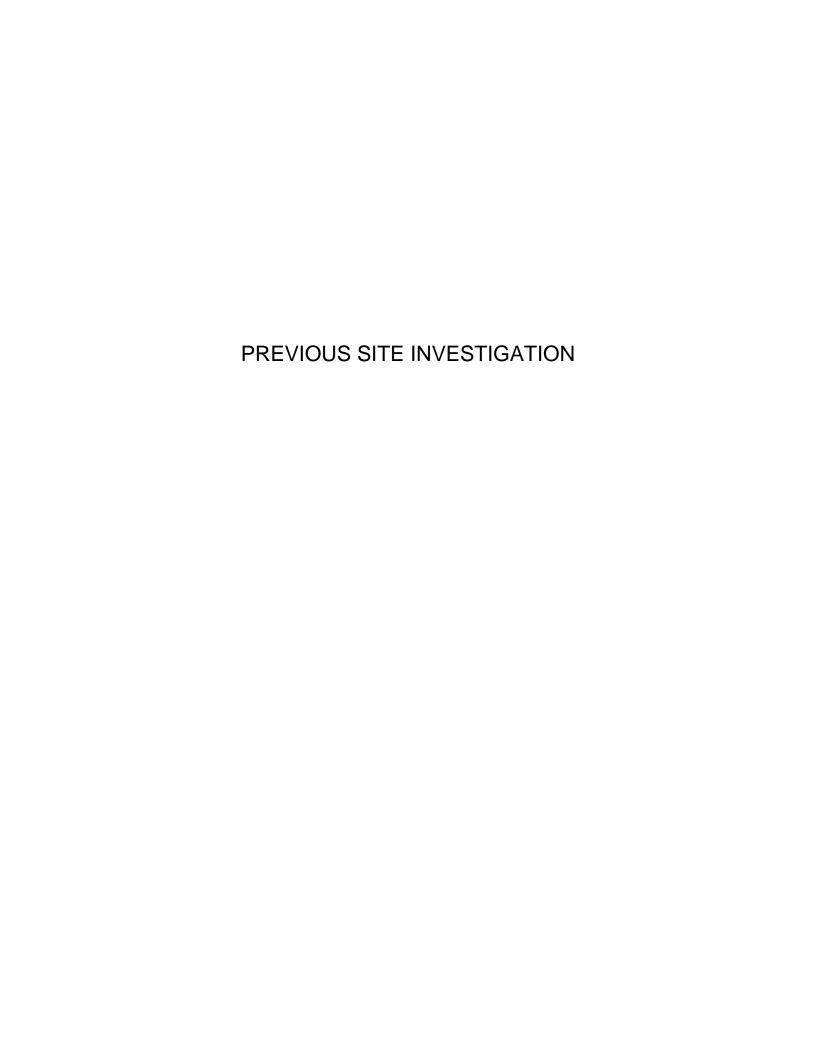
Floor Area	91,742 sq ft	Estimated TCV	\$1,436,543
Occupancy	Office Building	Class	C
Stories Above Ground	3	Average Story Height	14 ft
Basement Wall Height	Not Available		
Year Built	1969	Year Remodeled	1981
Percent Complete	100%	Heat	Forced Air Furnace
Physical Percent Good	40%	Functional Percent Good	90%
Economic Percent Good	65%	Effective Age	46 yrs

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Appendix C





1421 North Elston Ave. Ghicago, Illinois 60622 Phone (312) 486-2123

January 20, 1988

Mr. Jay Kolmar Kelley, Drye, and Warren 101 Park Avenue New York, NY 10178

Subject: Property Survey - Federal Mogul Corporation, Southfield, Michigan

Dear Mr. Kolmar:

Included in this report, please find the results of a building and property survey performed at the Federal Mogul corporate headquarters located at 26555 Northwestern Highway, Southfield, Michigan. The survey was conducted on January 14, 1988, and all laboratory analyses were completed by January 20, 1988.

Overall, the building is approximately 22 years old and is clean and well kept. According to the building services manager, there are presently no underground storage tanks on the property; one small (approximately 1,000 gallons) gasoline tank was removed "in 1985 or early 1986."

The owners are aware that the building contains asbestos and have retained a consultant to evaluate the extent and condition of the asbestos containing materials. Although we did not perform a complete survey of the building, which would have been duplicative effort, fifteen samples were collected for evaluation and Federal Mogul agreed to provide a copy of the Clayton Laboratories asbestos report where it becomes available.

While there is asbestos in many areas of the building, in anything from pipe lagging to ceiling tile, it appears to be in good condition and does not pose an immediate hazard to building occupants. Removal costs, should that option be considered, would be in the millions of dollars. In brief, it is advisable that asbestos is present and its removal may become mandatory sometime in the future.

Four hexane wipes were taken in the mechanical room (#1) and analyzed for PCB's. Those results, summarized in Table II attached, show that PCB's are present in measurable concentrations. The two Westinghouse transformers apparently contained PCB type oil at one time and Federal Mogul personnel stated that the PCB's have been removed and they are going through prescribed decontamination procedures.

Kelley, Drye, and Warner January 20, 1988 Page Two

The PCB, s found in the area are related only to oily spills on the side of a cabinet or on a concrete floor and do not exceed one kilogram in mass. This would qualify as a small quantity and would be exempt from permitting under present USEPA Guidelines, Section 721, should further cleanup be effected.

A composite sample of soil from several locations around the foundation of the building was made. Depth sampled was 0-6 inches. This sample was analyzed for USEPA RCRA parameters for hazardous, reactive, corrosive, or EP toxic characteristics. None of the analyses exceeded recommended guidelines.

Internally, the building is very clean, including the floor of the parking garage, which is immaculately kept. There are three gas fired boilers which supply heat to the building. The building is serviced by Southfield municipal water supply and no problems have ever come up between the company and the local sanitary district, according to company representatives.

In summary, with the exceptions as noted above, the building is in good condition and, to the extent of our survey and results of analyses, is in compliance with applicable environmental criteria and regulations.

If you have any questions or require further information, please do not hesitate to call.

Sincerely,

Jokn Karrow

Registered Professional Engineer

Gabriel Laboratories

JK/mm/L32

Attachments



FEDERAL MOGUL CORPORATION

RESULTS OF ANALYSES

Sample Collected By: Gabriel personnel

Sample No. 0363-88

Sample Date: January 14, 1988

Sample Description: S-1 Soil Composite

Date Received: January 15, 1988

Phase: Solid

	As a second	
Parameters	As <u>Received</u>	E.P. <u>Toxicity</u>
pH (10% Solution)	7.2	
Alkalinity as CaCO ₃ Total Solids	7,000 ppm 78.4%	
Arsenic		<0.1
Barium		<10
Cadmium		<0.05
Chromium Total		<0.2
Chromium Hexavalent		<0.2
Lead		<0.2
Mercury		<5.0 ppb
Selenium		<0.1
Silver		<0.1
Sulfide Total		
Sulfide Reactive	<10	
Cyanides Total	< 5	
Phenols	<20 mg/kg	
Flash Point	>212 OF	

Analyses Certified by John Karow Date 1/20/83

Results, except as noted, are expressed in ug/g (solid or semisolid phase), or mg/L (liquid phase).

Analyses performed according to <u>Standard Methods</u>, latest edition; <u>USEPA</u> <u>Test Methods for Evaluating Solid Wastes</u>, SW-846, 1982 and ASTM Methods.

TABLE II

FEDERAL MOGUL CORPORATION

HEXANE WIPES FOR PCB ANALYSES

Wipe Samples from Mechanical Room #1

Gabriel <u>Log No.</u>	Date/Description	P CB≤ s ≠
0359-88		
	January 14, 1988 P-1 Floor by Transformer in Cage	50 ug/sq. ft.
0360-88	January 14, 1988 P-2 Back of Westinghouse Control Center Cabinet	4 ug/sq. ft.
0361-88	January 14, 1988 P-3 Floor by Transformer Outside Cage	10 ug/sq. ft.
0362-88	January 14, 1988 P-4 by Cooling/Heat Exchange - of # 4GR45751	6 ug/sq. ft.

Samples were collected by Gabriel personnel.

^{*} All are Aroclor 1260 type.

⁽¹⁾ All results are expressed in ppm of PCB, s picked up wiping a one square foot area. (2)

⁽³⁾ Analyses performed according to Standard Methods, latest edition; USEPA Test Methods for Evaluating Solid Wastes, SW-846, 1982 and ASTM Methods.

Date Collected: January 15, 1988	Date Received: January 18, 1988
******	* * * * * * * * * * * * * * * * * * * *
Gabriel Sample # A0086-88	Field Sample # A-1
Location/Description: Federal Mogul,	A -1
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile% Amosite% Crocidolite% Anthophyllite% Actinolite% Tremolite%	Cellulose
Total % Asbesi	tos
Gabriel Sample # A0087-88	Field Sample # A-2
Location/Description: Federal Mogul,	4-2
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile	Cellulose 30-35% Fibrous Glass 40-45% Synthetic Polymer% Binding Material 15-20% Other%
Total % Asbest	os <u></u>
Gabriel Sample # A0088-88	Field Sample # A-3
Location/Description: Federal Mogul, A	-3
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile% Amosite% Crocidolite% Anthophyllite% Actinolite% Tremolite%	Cellulose % Fibrous Glass 90-95% Synthetic Polymer % Binding Material _1-5_% Other %
Total % Asbest	os <u><1 </u>
with the EPA Interim Method for th insulation samples; EPA-600/M4-82- (3) Samples will be retained for a min client.	rized light microscopy in accordance me determination of asbestos in bulk 020. Limum of 90 days unless notified by
Analyzed by Allenar	Date 1-20-88 Approved Hr.

Date Collected: January 14, 1988	Date Received: January 18, 198
* * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *
Gabriel Sample # A0089-88	Field Sample # A-4
Location/Description: Federal Mog	ul
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile 2	Gellulose 5-10%
Amosite% Grocidolite %	Fibrous Glass <u>75-80</u> %
Anthophyllite%	Synthetic Polymer% Binding Material
Crocidolite% Anthophyllite% Actinolite% Tremolite%	Other%
Total % A	sbestos <u>1</u> %
Gabriel Sample # A0090-88	Field Sample # A-5
Location/Description: Federal Mog	u1
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile <u>5-10%</u>	Cellulose <u>1-5.%</u>
Amosite%	Fibrous Glass <u>30-35</u> %
Crocidolite%	Synthetic Polymer%
Anthophyllite% Actinolite %	Binding Material <u>45-50%</u> Other%
Anthophyllite % Actinolite % Tremolite %	Other
Total % As	sbestos <u>10 </u>
Gabriel Sample # A0091-88	Field Sample # A-6
Location/Description: Federal Mogu	i]
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile%	Cellulose 10-15%
Amosite%	Fibrous Glass 30-35%
CrocidoliteZ AnthophylliteZ	Synthetic Polymer %
Actinolite %	Binding Material <u>45-50%</u> Other %
Tremolite2	
Total 2 As	ibestos <u>~1 </u>
(1) Samples were collected by Gabi	riel personnel.
(2) Analyses were performed using	polarized light microscopy in accordance
insulation samples; EPA-600/M4	or the determination of asbestos in bulk
(3) Samples will be retained for a	i minimum of 90 days unless notified by
client.	ikėjų iš gleiginininginėja grapini lityrius literatius ir surius su karininis gradita piesita litys ir karp Tyv
Analyzed by Mukanan	Date 1-20-88 Amount HZ
- Company - Company	Date <u> </u>

Date Collected: Janu	ary 14, 1988	Date Received: January 18, 1988
* * * * * * * * * * *	*****	*******
Gabriel Sample # A00	92-88	Field Sample # A-7
Location/Description:	Federal Mogul	
Asbestiform Material	<u>Present</u>	Non-Asbestos Material Present
Chrysotile 10- Amosite Crocidolite Anthophyllite Actinolite Tremolite		Cellulose <u>10-15%</u> Fibrous Glass <u>30-35%</u> Synthetic Polymer
	Total % Asbesto	s <u>15</u> %
Gabriel Sample # A0	093-88	Field Sample # A-8
Location/Description:	Federal Mogul	
Asbestiform Material	<u>Present</u>	Non-Asbestos Material Present
Chrysotile 10- Amosite 30- Crocidolite Anthophyllite Actinolite Tremolite	35% 	Cellulose <u>1-5.%</u> Fibrous Glass <u>5-10</u> % Synthetic Polymer <u>%</u> Binding Material <u>25-30</u> % (Quartz) Other <u>1-5</u> %
	Total % Asbesto	s <u>50</u> %
Gabriel Sample # A009	94-88	Field Sample # A-9
Location/Description:	Federal Mogul	
Asbestiform Material I	resent	Non-Asbestos Material Present
Chrysotile Amosite Crocidolite Anthophyllite Actinolite Tremolite		Cellulose <u>15-20</u> % Fibrous Glass <u>45-50</u> % Synthetic Polymer% Binding Material <u>25-30</u> % Other%
	Total % Asbestos	4
.2) Analyses were per with the EPA Inte insulation sample	rim Method for the s; EPA-600/M4-82-02	zed light microscopy in accordance determination of asbestos in bulk
analyzed by Sku	ENAN - DA	te <u>/-lu-88</u> ApprovedPP

gabriel 🕹

Date Collected: January 14, 1988	Date Received: January 18, 1988
*************	* * * * * * * * * * * * * * * * * * * *
Gabriel Sample # A0095-88	Field Sample # A-10
Location/Description: Federal Mogu	.1
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile% Amosite%	Cellulose <u>1-5 %</u>
Crocidolite 2	Fibrous Glass 1-5 %
Anthophyllite%	Synthetic Polymer <u>%</u> Binding Material <u>60-65</u> %
Actinolite% Tremolite%	(Quartz) Other 20-25%
Total % As	bestos <u>. <l< u=""> Z</l<></u>
Gabriel Sample # A0096-88	Field Sample # A-11
Location/Description: Federal Mogu	
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile%	Cellulose <u>30-35%</u>
Amosite%	Fibrous Glass 15-20%
Crocidolite%	Synthetic Polymer
AnthophylliteZ ActinoliteZ TremoliteZ	Binding Material 40-45% Other%
	bestos <u> <1 </u>
	pescos
Gabriel Sample # A0097-88	Field Sample # A-12
Location/Description: Federal Mogul	
Asbestiform Material Present	Non-Asbestos Material Present
Chrysotile <u>20-25</u> %	Cellulose <u>1-5</u> %
AmositeZ CrocidoliteZ	Fibrous Glass
Anthophyllite%	Synthetic Polymer%
Actinolite 7	Binding Material <u>50-55%</u> (Vermiculite) Other <u>10-15</u> %
	estos <u>25</u> %
 Samples were collected by Gabri Analyses were performed using p 	olarized licht microscope :-
with the EPA Interim Method for	the determination of ashestoe in bulk
THEOLEGICAL SAMPLES; EPA-600/M4-	·8·2=020**********************************
3) Samples will be retained for a	minimum of 90 days unless notified by
nalyzed by Skknan	Date
1. 1	

KELLEY, DRYE, & WARREN

ASBESTOS SURVEY

BULK ASBESTOS REPORT

Gabriel Sample # January 15, 1988	Field Sample # January 18, 1988
Date Collected: A0098-88	Date Received: A-13
Location/Description: Federal Mogul	
<u>Asbestiform Material Present</u>	Non-Asbestos Material Present
Chrysotile% Amosite% Crocidolite% Anthophyllite% Actinolite% Tremolite%	Cellulose 1-5-% Fibrous Glass 85-90% Synthetic Polymer 2 Binding Material 1-5-% Other 2
insulation samples; EPA-600/M4-82- (3) Samples will be retained for a min client.	rized light microscopy in accordance

above ground storage tank air quality asbestos/lead-based paint baseline environmental assessment brownfield redevelopment building/infrastructure restoration caisson/piles coatings concrete construction materials services corrosion dewatering drilling due care analysis earth retention system environmental site assessment facility asset management failure analyses forensic engineering foundation engineering geodynamic/vibration geophysical survey geosynthetic greyfield redevelopment ground modification hydrogeologic evaluation industrial hygiene indoor air quality/mold instrumentation ISO14001 EMS masonry/stone metals nondestructive testing pavement evaluation/design property condition assessment regulatory compliance remediation risk assessment roof system management sealants/waterproofing settlement analysis slope stability storm water management structural steel/welding

underground storage tank

PHASE II ENVIRONMENTAL SITE ASSESSMENT

26555 NORTHWESTERN HIGHWAY SOUTHFIELD, MICHIGAN

SME Project Number: PE52844 November 22, 2006





Soil and Materials Engineers, Inc.
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James M. Less, CIH
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Larry W. Shook, PE
Michael J. Thelen, PE
John C. Zarzecki, CWI, CDT

November 22, 2006

Mr. Florencio De Avila Lexington Corporate Properties Trust 101 East Erie Suite 950 Chicago, IL 60611

RE: Phase II Environmental Site Assessment 26555 Northwestern Highway Southfield, Michigan SME Project No. PE52844

Dear Mr. De Avila:

Soil and Materials Engineers, Inc.'s (SME's) Phase II Environmental Site Assessment report of the above referenced site (Property) is attached. The subsurface assessment was conducted to assess the potential for a release from the former 2,000-gallon gasoline underground storage tank (UST) removed from the Property in 1986.

SME understands Lexington Corporate Properties Trust will rely upon the professional opinions and representations contained in the report in accordance with the terms and conditions agreed upon for the project. This reliance is not to be construed as a warranty or guarantee on the part of SME.

If you have any questions or comments concerning the report, please contact us.

Sincerely,

SOIL AND MATERIALS ENGINEERS, INC

Mark J. Quimby

Environmental Specialist

Daniel O. Roeser, PG

Vice President

Attachments: Phase II Environmental Site Assessment Report

Plymouth Bay City Grand Rapids Kalamazoo Lansing Shelby Township Toledo Traverse City

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consultants in the geosciences, materials, and the environment

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1. INTRODUCTION

SME has performed a Phase II Environmental Site Assessment (ESA) of the property located at 26555 Northwestern Highway, in the City of Southfield, Oakland County, Michigan, hereinafter referred to as the Property. The Phase II ESA was conducted in accordance with SME's May 24, 2006, proposal addressed to Mr. James Bolt. This report was written by Mark J. Quimby and reviewed by Daniel O. Roeser, PG.

The objective of the subsurface assessment was to assess the potential for a release from the former 2,000-gallon gasoline underground storage tank (UST) removed from the vicinity of the loading docks and executive parking garage in 1986. Prior to performing the subsurface assessment, SME contacted Federal Mogul, lessee for the Property, to obtain more information regarding the former UST. Mr. Bill Wylonis, Facilities Manager for the Federal Mogul building, reported that he had no knowledge regarding the former UST. SME was directed to Mr. George Bugeja, with shipping and receiving, who reported that he had worked at the Federal Mogul building since 1984. Mr. Bugeja met SME at the Property on June 27, 2006, and discussed the former UST and associated dispenser locations. In addition, Mr. Herbert A. Hoskins, CHMM with SME, who worked as an Environmental Engineer at the Federal Mogul building from 1981 to 1987, also visited the Property during the subsurface assessment to assist with locating the former UST and associated dispenser.

2. SCOPE OF SERVICES

As part of the Phase II ESA, SME conducted the following services to assess the potential for a release from the former 2,000-gallon gasoline UST removed from the vicinity of the loading docks and executive parking garage in 1986:

- Mr. Herbert Hoskins, Environmental Engineer at the Property from 1981 to 1987, visited the Property during the subsurface assessment to assist with locating the former UST and associated dispenser;
- Four soil probes, SP1 through SP4, were advanced on June 27, 2006;
- Temporary groundwater monitoring wells were installed at each soil probe location;
- Four soil samples, four groundwater samples, and four quality assurance/quality control (QA/QC) were collected for potential chemical analyses;



- One soil sample, three groundwater samples, and two QA/QC samples were submitted for chemical analyses, including volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and lead;
- Field observations and measurements and results of chemical analyses were compiled and evaluated; and
- This Phase II ESA report was prepared.

3. FIELD PROCEDURES

As indicated above, SME completed four soil probes and installed temporary monitoring wells at each soil probe location. Figure 1 in Appendix A depicts the soil probe locations. SME's field representative, Mr. Mark J. Quimby, was on site during soil probe and well installation activities to observe subsurface conditions, screen soil samples with a photoionization detector (PID), and to collect samples for laboratory analysis.

3.1 Soil Probes

SME performed soil probes SP1 through SP4 on June 27, 2006. SP1 was performed in the center of the former 2,000-gallon gasoline UST location. SP2 was performed along the location of the former underground piping connecting the former UST to the former dispenser. SP3 was performed in the location of the former gasoline dispenser, adjacent to the building. SP4 was performed at the edge of the UST cavity between the location of the former UST and a storm drain catch basin .

The soil probes were advanced to depths ranging from approximately 8 to 12 feet below grade (BG) using an all-terrain vehicle equipped with a Geoprobe ® direct push sampling rig. Soil samples from the direct-push coring device were collected using a 48-inch long, 2-inch outside diameter (OD) Geoprobe ® Macro Sampler lined with a disposable acetate liner. Soil samples were collected continuously at approximately two-foot intervals to the termination depth of each soil probe for classification and field screening purposes. Soil samples collected for field screening with a PID were collected in glass jars and capped. The PID was calibrated on-site prior to use with isobutylene gas and ambient air.

SME field staff classified the soil samples in general accordance with the Unified Soil Classification System (USCS) and recorded the USCS classification on soil probe logs (Appendix B). Field screening with the PID was conducted by allowing time for the headspace in the glass jars containing the collected soil samples to equilibrate. The jars were then opened

enough to insert the tip of the PID. The PID registers the presence of organic vapors. The results of the field screening were also recorded on the soil probe logs.

Discrete soil samples were collected for potential analytical testing from areas of the soil column where visual observations, PID readings, and fill conditions indicated the highest potential impact. Soil samples were collected from the acetate liner by cutting open the liner with a utility knife and transferring the soil to pre-cleaned sample containers provided by the analytical laboratory. Soil samples obtained for analyses of volatile organic compounds (VOCs) were collected in accordance with Michigan Department of Environmental Quality Remediation and Redevelopment Division (MDEQ-RRD) *Operational Memorandum No. 2*, October 22, 2004 and Environmental Protection Agency (EPA) Sediment Sampling Method 5035 using methanol kits provided by the laboratory.

Residual soil cuttings generated from the soil probes were returned to the corresponding probe hole after sampling activities were completed. The remaining space in the soil probe holes, if present, was then backfilled with bentonite chips.

SME collected groundwater samples from temporary monitoring wells installed at each soil probe location for potential analytical testing. A temporary well point was installed and a disposable PVC screen and riser were driven into the saturated zone. The well screen was five feet in length with a slot size of 0.005 inches. The top of the well screen was placed at or above the top of the approximate saturated zone encountered during probing. Each temporary well was purged prior to sampling using polyethylene tubing connected to a peristaltic pump. The quantity of purge water was approximately one liter, corresponding to approximately three well volumes. Groundwater samples were collected at a low-flow rate (i.e. less then 400 mL/min) directly from the effluent end of the pump tubing, without filtration, into laboratory-supplied, pre-preserved containers.

3.2 Environmental Protocol

Sample collection, management, analyses, and QA/QC procedures used during this assessment were in general accordance with MDEQ protocols described in MDEQ-RRD Operational Memorandum No. 2, October 22, 2004. QA/QC procedures were followed to maintain and verify the integrity of the sampling program, maintain the integrity of the samples, and limit the potential for cross contamination. One soil and one groundwater field duplicate were collected to assess sampling precision. One aqueous field blank was collected to assess atmospheric cross-contamination potential in the groundwater sampling system. A trip blank was included in the container of samples for VOC analyses transferred to the laboratory.



Soil probe tools were cleaned prior to sampling and between each probe location with a laboratory grade detergent and distilled water. A new pair of disposable nitrile sampling gloves was used to transfer each sample from the acetate liner to the sample jar for potential laboratory analysis.

After sample collection, the containerized analytical samples were kept cool, (i.e. on ice or refrigerated), until delivery to the analytical laboratory. SME field staff followed chain of custody procedures documenting the sample handling sequence. The soil samples were submitted to Fibertec Environmental Services (Fibertec), located in Holt, Michigan for chemical analyses. Analytical methods, laboratory method reporting limits (MRLs), and chain of custodies are provided in the analytical report in Appendix D.

3.3 Analytical Testing and Parameters

SME selected a total of one soil sample, three groundwater samples, and two QA/QC samples for laboratory analyses. The remaining soil, groundwater, and QA/QC samples were placed on hold at the analytical laboratory. The selected samples and analysis parameters were based on field observations, PID readings, knowledge of the former UST contents, previous assessment results, and professional experience identifying contaminants likely to be present in the site environmental media. Samples selected for analyses are listed in Tables 1 (soil) and 2 (groundwater) in Appendix C.

Soil and groundwater samples and the groundwater field duplicate sample were analyzed for VOCs, polynuclear aromatic hydrocarbons (PAHs), and lead. The trip blank was analyzed for VOCs. The samples were analyzed in accordance with procedures and reporting limits specified in MDEQ-RRD *Operational Memorandum No. 2*, October 22, 2004.

4. SUBSURFACE CONDITIONS

SME observed the following soil and groundwater conditions at the four soil probe locations. The soil probe logs are presented in Appendix B. It is important to note that the former UST area was located in an asphalt paved square-like area down an asphalt paved ramp approximately 20 feet below the surrounding natural ground surface.

4.1 Soil Conditions

Below surficial asphalt and concrete surfacing materials at SP1 through SP4, soil conditions encountered at the Property generally consisted of sand fill, underlain by natural silty



sand to the explored depths of the soil probes. A more detailed description of the soil conditions observed at the soil probe locations are summarized below:

Stratum 1: Sand Fill

Sand fill with varying amounts of silt and gravel was encountered below four to six inches of asphalt and concrete surfacing material at SP1 through SP4. Asphalt fragments were observed at SP1. The sand fill extended to depths of two to three BG at SP2 through SP4 and to the maximum explored depth at SP1 or the backfilled UST cavity.

Stratum 2: Natural Silty Sand

Natural silty sand with trace gravel and frequent sandy silt layers and seams was encountered beneath Stratum 1 at SP2 through SP4 and extended to the maximum explored depth of 8 feet to 12 feet BG.

Please refer to the soil probe logs for the soil conditions at the specific probe locations. Stratification lines on the logs indicate a general transition between soil types. They are not intended to show an area of exact geological change. The soil descriptions are based on visual classification of the soils encountered.

Hydrocarbon odors, staining, and/or PID readings above one parts per million (ppm) were reported in the soil samples collected from SP1 and SP4.

4.2 Groundwater Conditions

Groundwater was observed by Mr. Quimby at each of the four soil probe holes (SP1 through SP4) during and directly after the soil probes at a depth of approximately 0.5 feet BG. Hydrocarbon odors were noted in the groundwater sample collected from SP1.

5. ANALYTICAL RESULTS

Results of analytical testing are summarized in Tables 1 (soil) and 2 (groundwater) in Appendix C. Only results for target analytes measured at levels greater than respective MRLs are included. Copies of laboratory analysis and QA/QC reports are included in Appendix D.

Mr. Bill Wylonis, Facilities Manager for the Federal Mogul building, reported that the storm drain catch basin located in the asphalt paved area near the former UST area drained into the sumps in the executive parking garage and subsequently pumped into the Property storm sewers. In addition, SME observed what appeared to be finger drains, draining subsurface water beneath the asphalt pavement into the storm drain catch basin. Mr. Wylonis further stated that

the City of Southfield Water Department reported that the Property storm sewers eventually drain into the Rouge River. Based on this information, it appears that the GSI pathway may be relevant and applicable and SME utilized GSI criteria, which are protective for surface water not used as a drinking water source. The GSI criterion for lead was calculated using the MDEQ calculation spreadsheet and the MDEQ-recommended water hardness value of 150 mg/l.

Concentrations of target analytes measured in soil samples were compared to the following MDEQ Part 201 Generic Residential Soil Cleanup Criteria and Screening Levels, dated January 23, 2006, for relevant and applicable exposure pathways:

- Drinking Water Protection Criteria,
- Groundwater Surface Water Interface (GSI) Criteria,
- Groundwater Contact Protection Criteria,
- Soil Volatilization to Indoor Air Criteria,
- Particulate Soil Inhalation Criteria,
- Direct Contact Criteria, and
- Soil Saturation Screening Levels.

Concentrations of target analytes measured in groundwater samples were compared to the following MDEQ Part 201 Generic Residential Groundwater Cleanup Criteria and Screening Levels, dated January 23, 2006, for relevant and applicable exposure pathways:

- Drinking Water Criteria,
- GSI Criteria,
- Groundwater Volatilization to Indoor Air Criteria.
- Groundwater Contact Criteria, and
- Water Solubility Criteria.

The following is a summary of the results.

5.1 Soil Results

Results of chemical analyses for target parameters measured at concentrations above respective MRLs in SP1-S2 are summarized in Table 1, Attachment C. Ethylbenzene, isopropylbenzene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, xylenes, acenaphthene, fluoranthene, and phenanthene were measured in SP1-S2 at concentrations exceeding MDEQ Part 201 Generic Residential Drinking Water Protection and/or GSI Criteria and Screening Levels. Benzo(a)pyrene was measured in SP1-S2 at concentrations exceeding MDEQ Part 201 Generic Residential Direct Contact Criterion and Screening Level.



Concentrations of remaining target parameters did not exceed their respective MRLs and/or relevant and applicable MDEQ Part 201 Generic Residential Soil Cleanup Criteria and Screening Levels. Please note that SP1-S2 was collected below the groundwater level encountered during probing.

5.2 Groundwater Results

Results of chemical analyses for target parameters measured at concentrations above respective MRLs in groundwater samples collected from SP1, SP3, and SP4 are summarized in Table 2, Attachment C. Benzene, ethylbenzene, naphthalene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes, fluoranthene, phenanthrene were measured in SP1-GW at concentrations exceeding MDEQ Part 201 Generic Residential Drinking Water and GSI Criteria and Screening Levels. Lead was measured in SP1-GW, SP3-GW, and SP4-GW at concentrations exceeding MDEQ Part 201 Generic Residential Drinking Water and GSI Criteria and Screening Levels. Concentrations of remaining target parameters did not exceed their respective MRLs and/or relevant and applicable MDEQ Part 201 Generic Residential Groundwater Cleanup Criteria and Screening Levels

5.3 QA/QC Results

No VOCs were detected above reporting limits in the trip blank. The concentrations of target constituents measured in the groundwater field duplicate were consistent.

Results from the project QA/QC program indicated that sampling, sample management, and analysis procedures were in control and that analysis results were representative of site conditions. The case narrative from Fibertec reported that the samples were received on ice and in good condition, analyses were conducted in accordance with chain of custody and within holding times, and applicable QA/QC parameters were within acceptance limits. The MRLs for some VOCs and PAHs analyses of SP1-S2 were elevated as a result of matrix interferences; however, the elevated MRLs were below Part 201 Generic Residential Cleanup Criteria and Screening Levels. QA/QC data and soil and groundwater MRLs are included in Tables 1 and 2 in Appendix C and the laboratory analysis report in Appendix D.



6. SUMMARY AND CONCLUSIONS

SME has completed subsurface assessment activities at the Property. The subsurface assessment was conducted to assess the potential for a release from the former 2,000-gallon gasoline UST removed from the vicinity of the loading docks and executive parking garage in 1986. SME's conclusions are summarized below.

Concentrations of VOCs, PAHs, and lead were measured in soil and/or groundwater samples above MDEQ Part 201 Generic Residential Criteria and Screening Levels. Therefore, the Property appears to be a "facility" as defined by Part 201 of the Natural Resources Environmental Protection Act, Michigan Public Act 451 of 1994, as amended (NREPA). The contaminated soil and groundwater at the Property were beneath asphalt and concrete surfacing materials and do not appear to represent human exposure issues based on the pavement barriers and use of the public water supply.

As the owner of a "facility", Lexington Corporate Properties Trust is required to comply with the requirements of Section 20107(a) of Part 201 of NREPA. SME recommends that a Due Care Plan in accordance with Section 20107(a) of Part 201 of NREPA be completed for the Property or proceeding with a regulatory closure under Part 213. For your reference, please refer to Appendix E for a copy of the MDEQ Part 201 Citizen's Guide for Due Care Requirements. SME also recommends that Lexington Corporate Properties Trust consult with legal counsel regarding Part 201 and 213 of NREPA liabilities associated with remedial or regulatory closure requirements.

7. GENERAL COMMENTS

The conclusions and recommendations in this report are based on information obtained from the area of investigation only, specifically defined as SP1 through SP4. The subsurface assessment was based on visual observations, PID readings, and analytical results. In the event unusual subsurface conditions are encountered at the Property (e.g. staining, odors, buried containers, etc.), additional assessment may be required. Furthermore, should additional surface, subsurface, or chemical data become available after the date of issue of this report, the conclusions and recommendations contained in this report may require modification after SME has reviewed the additional information. This review by SME of additional information would be conducted upon receipt of a request from the client.



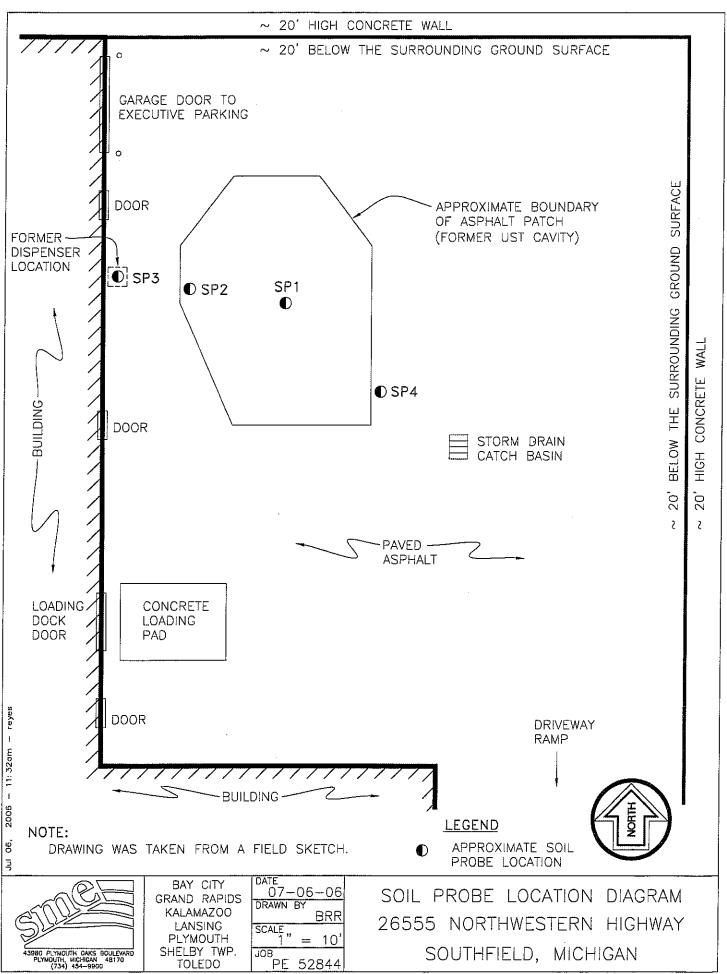
In the process of obtaining information in preparation of this letter report, procedures were followed that represent reasonable practices and principles in a manner consistent with that level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions.

Regulated chemical constituents other than those specifically evaluated may potentially be present at concentrations exceeding current state and/or federal regulatory limits. SME cannot attest to the possibility that regulated constituents are present outside of the evaluated area and within the property boundaries at concentrations exceeding current state and federal regulatory limits. SME's conclusions and recommendations are based on interpretation of the aforementioned regulations. The MDEQ's interpretation may vary.



APPENDIX A FIGURE





APPENDIX B SOIL PROBE LOGS





26555 NORTHWESTERN HWY

A/E:

SOIL PROBE SP1

PROJECT LOCATION: SOUTHFIELD, MI

BY: MJQ-PEA

START: 06/27/06

END: 06/27/06

CLIEN		LEXINGTON CORPORATE PROPERTIES TRUST	PROJECT NUMBER: PE52844						SHEET: 1				
DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION GROUND SURFACE ELEVATION= 20 FEET BG		SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID (ppm)	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values) 0 10 20 30 40 50				
0	.V.	Driller Reported Approximately 2 Inches of Asphalt Concrete Driller Reported 2 Inches of Portland Cement Concrete Crushed Concrete							7 10 20 30 70 30				
<u>¥</u> ¥		Crushed Concrete		S1	18		190						
2.5 -				S 2	18		<9,999	M					
5-	$\overset{\otimes}{\otimes}$	Fine to Medium Sand- Trace to Some Silt and Gravel- Trace Asphalt Fragments- Brown- Wet (SP-SM/Fill)		S 3	21		180						
7.5-	$\overset{\otimes}{\otimes}$			\$4	21		6 50	-					
10-	X X Z	END OF SOIL PROBE AT 8.5 FEET											
12.5													
15-													
17.5 —		WATER LEVEL OBSERVATIONS Notes: 1. THE INDICATED STRATIFICA	TION LINES AR	E APPRO	XIMAT	E. INSI	Γύ, ΤΗΕ	TRAI	NSITION BETWEEN MATERIALS MAY BE				
₹ G ¥ G	ROUND	WATER ENCOUNTERED DURING DRILLING WATER ENCOUNTERED MPLETION OF DRILLING MPLETION OF DRILLING GRADUAL. 2. ODORS AND STAINING WERI 3. GROUNDWATER ENCOUNTE 4. A TEMPORARY WELL SCREE 5. REFUSAL AT APPROXIMATE!	E NOTED 0 TO RED at 0.5 FEE N WAS SET FF	8 FEET BI ET BG. ROM APPE	ELOW	GRADE	(BG).						

DRILLER: SME RIG NO.: ATV

DRILL METHOD:

BACKFILL METHOD:

WATER LEVEL DURING DRILLING: 0.5 FEET BG

WATER LEVEL UPON COMPLETION: 0.5 FEET BG



BY: MJQ-PEA

PROJECT NAME:

26555 NORTHWESTERN HWY

A/E:

START: 06/27/06

END: 06/27/06

PROJECT LOCATION: SOUTHFIELD, MI

CLIENT	: LEXINGTON CORPORATE PROPERTIES TRUST PROJECT	T NUMBER: PE52844					SHEET: 1				
DEPTH (FEET)	PROFILE DESCRIPTION DID UNITED DESCRIPTION GROUND SURFACE ELEVATION= 20 FEET BG	SAMPLE TYPE/NUMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	(wdd) Old	ANALYTICAL SAMPLE	. 7	STANDAR TEST RES (N-values)	SISTANCE	ΞS	i
0	Driller Reported Approximately 2 Inches of Asphalt Concrete Oriller Reported 2 Inches of Portland Cement Concrete			B 8	124		0 10	20	30	4	0 50
₩ ₩	Priller Reported 2 Inches of Portland Cement Concrete Fine to Coarse Sand- Some Gravel- Trace to Some Silt- Dark Brown- Moist to Wet (SP-SM/Fill)	S1	14		<1						
2.5		\$2	14		<1						
5-		\$3	21	٠	<1						
7.5-	Silty Sand- Trace Gravel- Frequent Sandy Silt Layers and Seams- Brown- Wet (SM)	S4	21		<1	_					
10-		\$5	21		<1	-					
10 5	END OF SOIL PROBE AT 12 FEET	S6	21		<1						
12.5 -											
15 -											
17.5						╽┝	- 	- :			
♥ GRC ₩ GRC UPC	WATER LEVEL OBSERVATIONS DUNDWATER ENCOUNTERED DURING DRILLING DUNDWATER ENCOUNTERED DUNDWATER ENCOUNTERED N COMPLETION OF DRILLING Notes: 1. THE INDICATED STRATIFICATION LINES A GRADUAL. 2. GROUNDWATER ENCOUNTERED AT 0.5 F 3. A TEMPORARY WELL SCREEN WAS SET F	EET 8G.						TWEEN MA	ATERIALS	MAY BE	

DRILLER: SME

DRILL METHOD:

RIG NO.: ATV BACKFILL METHOD: WATER LEVEL DURING DRILLING: 0.5 FEET BG

WATER LEVEL UPON COMPLETION: 0.5 FEET BG



PROJECT NAME:

26555 NORTHWESTERN HWY

A/E:

START: 06/27/06

SOIL PROBE SP3

END: 06/27/06

PROJECT LOCATION: SOUTHFIELD, MI BY: MJQ-PEA CLIENT: LEXINGTON CORPORATE PROPERTIES TRUST

PROJECT NUMBER: PE52844

SHEET: 1

CLIEN	T:	LEXINGTON CORPORATE PROPERTIES TRUST PROJECT	PROJECT NUMBER		NUMBER: PE52844		844		SHEET: 1	
оертн (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	PI E TYPE/NI IMBER	INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PID (ppm)	ANALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (N-values)	ON
	SX PRC	GROUND SURFACE ELEVATION= 20 FEET BG	MAK		Š	SIX	DID (ANA	0 10 20 30	40 50
0		Driller Reported Approximately 4 Inches of Asphalt Concrete	- - -					Ť	0 20 30	
¥ ¥	XX	Crushed Asphalt						П		
		Fine to Medium Sand- Trace Silt and Gravel- Brown- Wet (SP-Fill)		S1	18		<1			
2.5				S2	18		<1			
5-				S 3	18		<1			
7.5		Silty Sand- Trace Gravel- Frequent Sandy Silt Layers and Seams- Wet (SM)		S4	18	•	<1			
10-				S5	12		<1			
				S6	12		<1			
12.5 -		END OF SOIL PROBE AT 12 FEET								
15-										
	·									
17.5					Ì			╽├		
		VATER LEVEL OBSERVATIONS Notes: 1. THE INDICATED STRATIFICATION LINES.	ARE AP	PROX	IMATI	E. IN SIT	U, THE	TRA	NSITION BETWEEN MATERIALS MAY	BE
₹ GF ¥ GF UF	ROUND	WATER ENCOUNTERED DURING DRILLING WATER ENCOUNTERED MPLETION OF DRILLING GRADUAL. 2. GROUNDWATER ENCOUNTERED AT 0.5 3. A TEMPORARY WELL SCREEN WAS SET	FEET B	iG.						

DRILLER: SME

RIG NO.: ATV

DRILL METHOD: BACKFILL METHOD: WATER LEVEL DURING DRILLING: 0.5 FEET BG WATER LEVEL UPON COMPLETION: 0.5 FEET BG



PROJECT NAME:

26555 NORTHWESTERN HWY

A/E:

START: 06/27/06

SOIL PROBE SP4 END: 06/27/06

PROJECT LOCATION: SOUTHFIELD, MI BY: MJQ-PEA

PROJECT NUMBER: PE52844

LEXINGTON CORPORATE PROPERTIES TRUST SHEET: 1 SAMPLE TYPE/NUMBER INTERVAL PROFILE INCHES OF RECOVERY DESCRIPTION STANDARD PENETRATION TEST RESISTANCES (N-values) SYMBOLIC PROFILE BLOWS PER SIX INCHES PID (ppm) **GROUND SURFACE** ELEVATION= 20 FEET BG Driller Reported Approximately 4 Inches of Asphalt Concrete S1 19 36 Fine to Medium Sand- Trace Silt and Gravel- Brown- Moist (SP/Fill) 2.5 S2 19 <1 21 **S3** <1 Silty Sand- Trace Gravel- Frequent Sandy Silt Layers and Seams- Wet (SM) **S4** 21 <1 7.5 END OF SOIL PROBE AT 8 FEET 10 12.5 15⁻ 17.5

WATER LEVEL OBSERVATIONS GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING

Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE

2. ODORS AND STAINING WERE NOTED 0 TO 2 FEET BELOW GRADE (BG)

3. GROUNDWATER ENCOUNTERED AT 0.5 FEET BG.
4. A TEMPORARY WELL SCREEN WAS SET FROM APPROXIMATELY 3 TO 8 FEET BG.

DRILLER: SME RIG NO.: ATV

DRILL METHOD: BACKFILL METHOD: WATER LEVEL DURING DRILLING: 0.5 FEET BG

WATER LEVEL UPON COMPLETION: 0.5 FEET BG

APPENDIX C ANALYTICAL COMPARISON TABLES



TABLE I SOIL ANALYTICAL RESULTS 26555 NORTHWESTERN HWY

Southfield, Michigan SME Project No. PE52844

				Part 20	l Generie Resident	ial(cc/st.			Sample Location Sample ID Depth (feet) Date Collected	SP1 S2 (2,5 - 3,5') 6/27/2006
Constituent VOCs	CAS Number	Drinking Water Protection Criteria	Groundwater Surface Water Interface (GSI) Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Ambient Air Infinite Source Volatile Solt Inhalation Criteria	Particulate Solf Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Lovels	
Benzene	71-43-2	100	4,000	220,000	1.400	.3 nna	300 000 000			
sec-Butylbenzene	135-98-8	1,600	4,000 ID	88.000	1,600	13,000	380,000,000	180,000	400,000	<50
Ethylberzene	100-41-4	1,500		•	ID	ID	ID.	2,500,000	10,000,000	240
Isopropylbenzene	92-82-8	91,000	360	140,000	87,000	720,000	10,000,000,000	140,000	140,000	1,300
Naphthalene	91-20-3	35,000	ID 870	390,000	390,000	1,700,000	5,800,000,000	390,000	390,000	<250
n-Propylbenzene	103-65-1	1,600		2,100,000	250,000	30,000	20,000,000	16,000,000	NA	4,900
Toluene	103-65-1		NA Same	300,000	ID	ID	1,300,000,000	2,500,000	10,000,000	950
1,2,4-Trimethylbenzene		16,000	2,800	250,000	250,000	2,800,000	27,000,000,000	250,000	250,000	1,900
	95-63-6	2,100	570	110,000	110,000	21,000,000	82,000,000,000	110,000	110,000	8,400
1,3,5-Trimethylbenzene	108-67-8	1,800	1,100	94,000	94,000	16,000,000	82,000,000,000	94,000	94,000	3,600
Xylenes Other VOC Constituents	1330-20-7	5,600	700	150,000	150,000	46,000,000	290,000,000,000	150,000	150,000	9,900
PAHs	CS	CS	CS	CS	CS	CS	CS	CS	CS	<rl.< td=""></rl.<>
Acenaphthene	83-32-9	300,000	4,400	970,000	190,000,000	81,000,000	14,000,000,000	41,000,000	NA	5,800
Acenaphthylene	208-96-8	5,900	ID	440,000	1,600,000	2,200,000	2,300,000,000	1,600,000	NA NA	<1,700
Anthracene	120-12-7	41,000	ID	41,000	1,000,000,000 (ID)	1,400,000,000	67,000,000,000	230,000,000	NA NA	2,700
Benzo(a)anthracene	56-55-3	NLL	NLL	NLL	NLV	NLV	ID I	20,000	NA	2,900
Benzo(a)pyrene	50-32-8	NLI,	NLL	NLL	NLV	NLV	1,500,000	2,000	NA	2,300
Benzo(b)fluoranthene	205-99-2	NLL	NLL	NLL	1D	ID.	ID	20,000	NA	3,300
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	NLL	NLV	NLV	800,000,000	2,500,000	NA	<1,700
Benzo(k)fluoranthene	207-08-9	NLL	NLL.	NLL	NLV	NLV	ID	200,000	NA.	<1,700
Chrysene	218-01-9	NLL	NLL	NLL	ID.	ΙD	QI.	2,000,000	NA.	3,200
Dibenzo(a,h)anthracene	53-70-3	NLL	NLL	. NLL	NLV	NLV	1D	2,000	· NA	<1,700
Fluoranthene	206-44-0	730,000	5,500	730,000	1,000,000,000 (D)	740,000,000	9,300,000,000	46,000,000	NA NA	12,000
Fluorene	86-73-7	390,000	5,300	890,000	580,000,000	130,000,000	9,300,000,000	27,000,000	NA	2,400
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL .	NLL.	NLV	NLV	di di	20,000	NA NA	<1,700
2-Methylnaphthalene	91-57-6	57,000	1D	5,500,000	!D	aı	ID	8,100,000	NA	12,000
Phenanthrene	85-01-8	56,000	5,300	1,100,000	2,800,000	160,000	6,700,000	1,600,000	NA.	15,000
Pyrene	129-00-0	480,000	1D	480,000	1,000,000,000 (D)	650,000,000	6,700,000,000	29,000,000	NA	6,900
Inorganics										
Lead	7439-92-1	70,000	2,800,000	IĐ	NLV	NLV	10,000,000	400,000	NA	19,000

NOTES

- (1) Concentrations reported in µg/kg (parts per billion or ppb) unless otherwise noted
- (2) Analytical results were compared to the MDEQ Part 201 Generic Residential Cleanup Criteria and Screening Levels, dated January 23, 2006 (CC/SL)
- (3) <RL = Analytical result was less than the reporting limit.
- (4) CS = Constituent Specific.
- (5) ID = Insufficient data to develop criteria.
- (6) NA = Criterion or value is not available.
- (7) NLV = Chemical is not likely to volitilize under most conditions
- (8) NLL = Hazardous substance is not likely to leach under most soil conditions.
- (9) D Caculated criterion exceeds 100%, hence it is reduced to 100% or 1,000,000,000 ppb.
- (10) Italicized GSI Criterion were calculated using a water hardness of 150 mg/L CaCO3 and the MDEQ spreadsheet (G).
- (11) GSI criterion utilized were not protective for surface water used as a drinking water source.
- (12) Highlighted and bolded results exceed corresponding MDEQ Part 201 Cleanup Criteria.

TABLE 2 GROUNDWATER ANALYTICAL RESULTS 26555 NORTHWESTERN HWY

Southfield, Michigan SME Project No. PE52844

			art 201 Generic	Residential CC//	3	Sample Location Sample ID Serven Depth (feel) Date Collected	SP1 GW (3 - 8') 6/27/2906	SP1 GW (Dup-GW) (3 - 8') 6/27/2006	SP3 GW (3 - 8') 6/27/2006	SP4 GW (3 - 8')	Trip Bank
Constituent	CAS Number	Driaking Water Griteria	Groundwater Surface Water	Groundwater Volatilization	Groundwater Contact Criteria	Water Solubility Criteria	6/2//2008	9/2//2018	6/2//2008	6/27/2006	6/27/2006
VOCs											
Benzene	71-43-2	5.0	200	5,600	11,000	1,750,000	10	9.5	<1.0	3.2	<1.0
sec-Butylbenzene	135-98-8	80	ID I	ED	4,400	NA	1.5	1.3	<1.0	<1.0	<1.0
Ethylbenzene	100-41-4	74	18	110,000	170,000	169,000	50	44	<1.0	4.7	<1.0
lsopropylbenzene	98-82-8	800	ID I	56,000	56,000	56,000	5.2	5,0	<5.0	<5.0	<5.0
Naphthalene	91-20-3	520	13	31,000	31,000	31,000	1.60	140	<5.0	12	<5.0
n-Propylbenzene	103-65-1	80	ID I	ID	15,000	NA.	12	10	<1.0	1.1	<1.0
Toluene	108-88-3	790	140	530,000	530,000	526,000	150	140	<1.0	11	<1.0
1,2,4-Trimethylbenzene	95-63-6	63	17	56,000	56,000	55,890	140	110	<1.0	13	<1.0
1,3,5-Trimethylbenzene	108-67-8	. 72	45	61,000	61,000	61,150	51	41	<1.0	4.6	<1.0
Xylenes	1330-20-7	280	35	190,000	190,000	186,000	370	320	< 3.0	28	< 3.0
Other VOC Constituents	C\$	CS	CS	CS :	CS	CS	<rl< td=""><td><rl< td=""><td><rl< td=""><td><rl< td=""><td><rl< td=""></rl<></td></rl<></td></rl<></td></rl<></td></rl<>	<rl< td=""><td><rl< td=""><td><rl< td=""><td><rl< td=""></rl<></td></rl<></td></rl<></td></rl<>	<rl< td=""><td><rl< td=""><td><rl< td=""></rl<></td></rl<></td></rl<>	<rl< td=""><td><rl< td=""></rl<></td></rl<>	<rl< td=""></rl<>
PAlis											
Acenaphthene	83-32-9	1,300	19	4,200	4,200	4,240	9.6	91	<5.0	<5.0	NE
Acenaphthylene	208-96-8	52	מו	3,900	3,900	3,930	<5.0	<5.0	<5.0	<5.0	NE.
Anthracene	120-12-7	43	ID	43	43	43	<5.0	<5.0	<5.0	<5.0	NE
Benzo(a)anthracene	56-55-3	2.1	ID I	NLV	9.4	9.4	<1.0	<1.0	<1.0	<1.0	NE
Benzo(a)pyrene	50-32-8	5.0	ם ו	NLV	1.0 (M)	16	<1.0	<1.0	<1.0	<1.0	NE
Benzo(b)fluoranthene	205-99-2	1.5	ID I	ID	1.5	1.5	<1.0	<1.0	<1.0	<1.0	NE
Benzo(g,h,i)perylene	191-24-2	1.0 (M)	NA NA	NLV	1.0 (M)	0.26	<1.0	<1.0	<1.0	<10	NE
Benzo(k)fluoranthene	207-08-9	L0 (M)	NA NA	NLV	1.0 (M)	0.8	<1.0	<1,0	<1.0	<1.0	NE.
Chrysene	218-01-9	1.6	ID	ΙĐ	1.6	1.6	<1.0	<1.0	<1.0	<1.0	NE
Dibenzo(a,h)anthracene	53-70-3	2.0 (M)	ID	NLV	2.0 (M)	2.49	<2.0	<2.0	<2.0	< 2.0	NE
Fluoranthene	206-44-0	210	1.6	210	210	206	2.0	2.0	<1.0	<10	NE NE
Fluorene	86-73-7	880	12	2,000	2,000	1,980	<5.0	<5.0	<5.0	<5.0	NE.
Indeno(1,2,3-cd)pyrene	193-39-5	2.0 (M)	ID	NLV	2.0 (M)	0.022	<2.0	<2.0	<2.0	<2.0	NE.
2-Methylnaphthalene	91-57-6	260	ID	ID	25,000	24,600	14	14	<5.0	<5.0	NE NE
Phenanthrene	85-01-8	52	2.4	1,000	1,000	1,000	: : : : : . 7.7 : : : : : :	7.9	<2.0	<2.0	NE
Pyrene	129-00-0	i40	ID	140	140	135	<5.0	<5.0	<5.0	<5.0	NE NE
Inorganics											
Lead	7439-92-1	4.0	16	NLV	ID	NA	23	31	69	260	NE

NOTES.

- (1) Concentrations reported in µg/L (parts per billion or ppb) unless otherwise noted
- (2) Analytical results were compared to the MDEQ Part 201 Generic Residential Cleanup Criteria and Screening Levels, dated January 23, 2006 (CC/SL).
- (3) <RL = Analytical result was less than the reporting limit.
- (4) CS = Constituent Specific
- (5) ID = Insufficient data to develop criteria.
- (6) NA = Criterion or value is not available.
- (7) NLV = Chemical is not likely to volitilize under most conditions.
- (8) M = Calculated enterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
- (9) Italicized GSI Criterion were calculated using a water hardness of 150 mg/L CaCO3 and the MDEQ spreadsheet {G}.
- (10) GSI criterion utilized were not protective for surface water used as a drinking water source.
- (11) Highlighted and bolded results exceed corresponding MDEQ Part 201 Cleanup Criteria

APPENDIX D LABORATORY ANALYTICAL DATA SHEETS





July 12, 2006

RECD JUL 2 0 2006

Narrative

Customer: SME

Project Identification: 26555 Northwestern Hwy/PE52844

Fibertec Project Number: 18394

Sample Collection/ Receipt

The following samples were collected on June 27, 2006 and received by Fibertec on June 28, 2005.

5 Soils (4 samples on hold)

7 Waters (including a trip blank, an equipment blank and 2 samples on hold)

All Samples were received on ice and in good condition.

Analysis

Analyses were conducted in accordance with chain of custody and within hold times.

All applicable quality assurance/ quality control parameters were within acceptance limits unless otherwise noted.

The following results were reported with elevated reporting limits.

Laboratory Number	Client ID	<u>Analysis</u>	Reason for elevated RL
18394.001	SP1-S2	VOC	Sample Matrix
18394.001	SP1-S2	PNA	Sample Matrix

Volatiles

The sample pH for 18394-009 (SP4-GW) was 8.

Authorized Signature

Date

1914 Holloway Drive Holt, Michigan 48842 7794 Boardwalk Road Brighton, Michigan 48116 Telephone: (517) 699-0345 Telephone: (248) 446-5700 Facsimile: (517) 699-0388 Facsimile: (248) 446-5701



Wednesday, July 12, 2006

Fibertec Project Number:

18394

Project Identification:

26555 Northwestern Hwy/PE52844

Submittal Date:

6/29/2006

Mr. Mark Quimby Soil and Materials Engineers, Inc. - Plymouth 43980 Plymouth Oaks Plymouth, MI 48170

Ryleen Gandall for

Dear Mr. Quimby,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed as requested and the results compiled in the enclosed report.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345. Please note samples will be disposed of 30 days after reporting date.

Sincerely,

Daryl P. Strandbergh Laboratory Director

DPS/kc

Enclosures



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Soil/Solid

Fibertec Project Number:

18394

Sample Number:

18394-001

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-S2

Project Number:

PE52844

Client Sample Number:

1

Sample Date:

6/27/2006

Chain of Custody Number:

56606

Comments:

Definitions:

All Results Reported On Dry Weight Basis. Percent Moisture = 10.0%.

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 503	5 (EPA 5035/E	PA 8260B)					
Acetone	ND	μg/kg	1000	I	VA06G02A	6/27/2006	7/2/2006	JAS
Acrylonitrile	ND	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
Benzene	ND	µg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Bromobenzene	ND	μg/kg	100	I	VA06G02A	6/27/2006	7/2/2006	JAS
Bromochloromethane	ND	μg∕kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
Bromodichloromethane	ND	μg⁄kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
Bromoform	ND	μg/kg	100	I	VA06G02A	6/27/2006	7/2/2006	JAS
Bromomethane	ND	μg/kg	200	1	VA06G02A	6/27/2006	7/2/2006	JAS
2-Butanone	ND	μg/kg	750	1	VA06G02A	6/27/2006	7/2/2006	JAS
n-Butylbenzene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
sec-Butylbenzene	240	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
tert-Butylbenzene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Carbon Disulfide	ND	μg/kg	250	1	VA06G02A	6/27/2006	7/2/2006	JAS
Carbon Tetrachloride	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Chlorobenzene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Chloroethane	ND	μg∕kg	250	1	VA06G02A	6/27/2006	7/2/2006	JAS
Chloroform	ND	μ g/k g	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Chloromethane	ND	μg/kg	250	i	VA06G02A	6/27/2006	7/2/2006	JAS
2-Chlorotoluene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	IAS
Dibromochloromethane	ND	μ g/kg	100	1	VA06G02A	6/27/2006	7/2/2006 .	JAS

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Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (248) 446-5700 T: (231) 775-8368



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Soil/Solid

Fibertec Project Number:

18394

Sample Number:

18394-001

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-S2

Project Number:

PE52844

Client Sample Number:

Sample Date:

6/27/2006

Chain of Custody Number:

56606

Comments:

Definitions:

All Results Reported On Dry Weight Basis, Percent Moisture = 10.0%.

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

 $\mathbf{E} = \mathbf{E}$ stimated value; $\mathbf{J} = \mathbf{A}$ nalyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 503	5 (EPA 5035/	EPA 8260B)		1		I	
1,2-Dibromo-3-chloropropane	ND	μg/kg	10	1	VA06G02A	6/27/2006	7/2/2006	JAS
Dibromomethane	ND	μg/kg	250	ı	VA06G02A	6/27/2006	7/2/2006	JAS
1,2-Dichlorobenzene	ND	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
1,3-Dichlorobenzene	ND	μ g /kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
1,4-Dichlorobenzene	ND	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
Dichlorodifluoromethane	ND	μg/kg	250	1	VA06G02A	6/27/2006	7/2/2006	JAS
1,1-Dichloroethane	ND	μg/kg	50	i	VA06G02A	6/27/2006	7/2/2006	JAS
1,2-Dichloroethane	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
1,1-Dichloroethene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
cis-1,2-Dichloroethene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
trans-1,2-Dichloroethene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
1,2-Dichloropropane	ND	μg/kg	50	I	VA06G02A	6/27/2006	7/2/2006	JAS
cis-1,3-Dichloropropene	ND	μ g/ kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
trans-1,3-Dichloropropene	ND	μ g /kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Ethylbenzene	1300	µg∕kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
Ethylene Dibromide	ND	μg/kg	20	1	VA06G02A	6/27/2006	7/2/2006	JAS
2-Hexanone	ND	μg/kg	2500	1	VA06G02A	6/27/2006	7/2/2006	JAS
Methyl Iodide	ND	μg/kg	100	Ī	VA06G02A	6/27/2006	7/2/2006	JAS
Isopropylbenzene	ND	μg/kg	250	1	VA06G02A	6/27/2006	7/2/2006 .	JAS
4-Methyl-2-pentanone	ND	µg/kg	2500	1	VA06G02A	6/27/2006	7/2/2006	JAS

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Soil/Solid

Fibertec Project Number:

18394

Sample Number:

18394-001

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-S2

Project Number:

PE52844

Client Sample Number:

Sample Date:

6/27/2006

Chain of Custody Number:

56606

Comments:

All Results Reported On Dry Weight Basis. Percent Moisture = 10.0%.

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

	Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
1	Volatile Organic Compounds (VOCs)	by GC/MS, 503	5 (EPA 5035/E	EPA 8260B)					
	Methylene Chloride	ND	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
-	MTBE	ND	μg/kg	250	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Naphthalene	4900	μg/kg	330	1	VA06G02A	6/27/2006	7/2/2006	JAS
	n-Propylbenzene	950	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Styrene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,1,1,2-Tetrachloroethane	ND	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,1,2,2-Tetrachloroethane	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Tetrachloroethene	ND	µg∕kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Toluene	1900	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,2,4-Trichlorobenzene	ND	μg/kg	330	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,1,1-Trichloroethane	ND ·	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,1,2-Trichloroethane	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Trichloroethene	ND	μg/kg	50	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Trichlorofluoromethane	ND	µg∕kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
	1,2,3-Trichloropropane	ND	μg/kg	100	I	VA06G02A	6/27/2006	7/2/2006	JAS
	1,2,4-Trimethylbenzene	8400	μg/kg	1000	10	V306G03A	6/27/2006	7/3/2006	JAS
	1,3,5-Trimethylbenzene	3600	μg/kg	100	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Vinyl Chloride	ND	μg/kg	40	1	VA06G02A	6/27/2006	7/2/2006	JAS
	Xylenes	9900	μg/kg	150	I	VA06G02A	6/27/2006	7/2/2006	JAS



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Soil/Solid

Fibertec Project Number:

18394

Sample Number:

18394-001A

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-S2

Project Number:

PE52844

Client Sample Number:

1

Sample Date:

6/27/2006

Chain of Custody Number:

56606

Comments: Definitions:

All Results Reported On Dry Weight Basis. Percent Moisture = 10.0%.

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)					L		
Percent Moisture (Water Content)	10	%	0.1	1	NA	6/30/2006	7/3/2006	BMG
Lead by ICP/MS (EPA 3050B/EPA 60	120)							
Lead	19000	μg/kg	1000	1	41093	7/3/2006	7/3/2006	ЛH
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 35	550B/EPA 827	0C)					
Acenaphthene	5800	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Acenaphthylene	ND	μg∕kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Anthracene	2700	μg⁄kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Benzo(a)anthracene	2900	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Benzo(a)pyrene	2300	µg∕kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Benzo(b)fluoranthene	3300	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Benzo(ghi)perylene	ND	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Benzo(k)fluoranthene	ND	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Chrysene	3200	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Dibenzo(a,h)anthracene	ND	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Fluoranthene	12000	μg/kg	I 700	5	41127	7/7/2006	7/8/2006	BDA
Fluorene	2400	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Indeno(1,2,3-cd)pyrene	ND	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
2-Methylnaphthalene	12000	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Phenanthrene	15000	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA
Pyrene	6900	μg/kg	1700	5	41127	7/7/2006	7/8/2006	BDA



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-006

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-GW

Project Number:

PE52844

Client Sample Number:

6

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	EDilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP.	A 5030B/EPA 8	3260B)					
Acetone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	BJK
Acrylonitrile	ND	μg/L	2.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Benzene	10	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
Bromobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromochloromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromodichloromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromoform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromomethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјк
2-Butanone	ND	μg/L	25	I	V906G06A	7/7/2006	7/7/2006	BJK.
n-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
sec-Butylbenzene	1.5	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
tert-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Carbon Disulfide	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЛК
Carbon Tetrachloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Chlorobenzene	ND	µg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chloroethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Chloroform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК.
Chloromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
2-Chlorotoluene	ND	μ g/L	5.0	ı	V906G06A	7/7/2006	7/7/2006	вјк.
Dibromochioromethane	ND	μg/L	5.0	I	V906G06A	7/7/2006	7/7/2006 1	BJK

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-006

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-GW

Project Number:

PE52844

Client Sample Number:

6

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

	Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
V	olatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA 8	3260B)				1	
	1,2-Dibromo-3-chloropropane	ND	μg/L	0.1	Ī	V906G06A	7/7/2006	7/7/2006	BJK
	Dibromomethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,2-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,3-Dichlorobenzene	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,4-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	Dichlorodifluoromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,1-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,2-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
	1,1-Dichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	cis-1,2-Dichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	trans-1,2-Dichloroethene	ND	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	вјк
	1,2-Dichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	cis-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	trans-1,3-Dichloropropene	ND	μg/L	0.1	I	V906G06A	7/7/2006	7/7/2006	ВЈК
	Ethylbenzene	50	μ ę /L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	Ethylene Dibromide	ND	µg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	2-Hexanone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	Methyl Iodide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	Isopropylbenzene	5.2	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	4-Methyl-2-pentanone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	вјк

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-006

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-GW

Project Number:

PE52844

Client Sample Number:

.

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOC	cs) by GC/MS (EP	A 5030B/EPA	8260B)					<u> </u>
Methylene Chloride	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
MTBE	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Naphthalene	160	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
n-Propylbenzene	12	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Styrene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,1,2-Tetrachloroethane	ND	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,2,2-Tetrachloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Tetrachloroethene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
Toluene	150	μg/Լ	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2,4-Trichlorobenzene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,1-Trichloroethane	ND ,	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,2-Trichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Trichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Trichlorofluoromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2,3-Trichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
I,2,4-Trimethylbenzene	140	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,3,5-Trimethylbenzene	51	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK.
Vinyl Chloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Xylenes	370	μg/L	3.0	1	V906G06A	7/7/2006	7/7/2006	вјк
								•



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-006A

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-GW

Project Number:

PE52844

Client Sample Number:

6

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
(PNAs) (EPA 3	535/EPA 8270C	()					
9.6	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L,	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
2.0	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
14	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
7.7	րg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
	(PNAs) (EPA 3: 9.6 ND	(PNAs) (EPA 3535/EPA 8270 C) 9.6	(PNAs) (EPA 3535/EPA 8270C) 9.6 μg/L 5.0 ND μg/L 5.0 ND μg/L 1.0 ND μg/L 2.0 2.0 μg/L 1.0 ND μg/L 2.0 1.0 ND μg/L 5.0 ND μg/L 5.0 ND μg/L 5.0 ND μg/L 5.0 14 μg/L 5.0 7.7 μg/L 5.0	Pactor Pactor	Result Units Report Limit Factor Batch	Result Units Report Limit Factor Batch Prep Date/Time	Prep Date/Time Prep Date/Time Prep Date/Time Analysis Date/Time Anal



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-006B

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP1-GW

Project Number:

PE52844

Client Sample Number:

6

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Batch	Prep Date/Time	Analysis Date/Time	Analyst
Lead by ICP/MS, Total (EPA 3005A/	EPA 6020)							
Lead	23	μg/L	3.0	1	41107	7/5/2006	7/6/2006	ЛН



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-008

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP3-GW

Project Number:

PE52844

Client Sample Number:

8

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA 8	3260B)					
Acctone	ND	μ g/L	50	1	V306G11A	7/11/2006	7/11/2006	JAS
Acrylonitrile	ND	μg/L	2.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Benzene	ND	μg/L	1.0	I	V306G11A	7/11/2006	7/11/2006	JAS
Bromobenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Bromochloromethane	ND	μg/L	1.0	I	V306G11A	7/11/2006	7/11/2006	JAS
Bromodichloromethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Bromoform	ND	μg/L	1.0	i	V306G11A	7/11/2006	7/11/2006	JAS
Bromomethane	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
2-Butanone	ND	μg/L	25	1	V306G11A	7/11/2006	7/11/2006	JAS
n-Butylbenzene	ND	μg/L	1.0	l	V306G11A	7/11/2006	7/11/2006	JAS
sec-Butylbenzene	ND	μg/L	1.0	1	V306GI1A	7/11/2006	7/11/2006	JAS
tert-Butylbenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Carbon Disulfide	ND	μg/L	5.0	. 1	V306G11A	7/11/2006	7/11/2006	JAS
Carbon Tetrachloride	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Chlorobenzene	ND	μg/L	1.0	1	V306GI1A	7/11/2006	7/11/2006	JAS
Chloroethane	ND	μg/L	5.0	i	V306G11A	7/11/2006	7/11/2006	JAS
Chloroform	ND	μg/L	1.0	1	V306GI1A	7/11/2006	7/11/2006	JAS
Chloromethane	ND	μg/L	5.0	Į.	V306G11A	7/11/2006	7/11/2006	JAS
2-Chlorotoluene	ND	μ g/ L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Dibromochloromethane	ND	μg/L	5.0	i	V306G11A	7/11/2006	7/11/2006	JAS

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-008

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP3-GW

Project Number:

PE52844

Client Sample Number:

8

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	B260B)		!			.ii
1,2-Dibromo-3-chloropropane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Dibromomethane	ND	μg/L	5.0	i	V306G11A	7/11/2006	7/11/2006	JAS
1,2-Dichlorobenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,3-Dichlorobenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,4-Dichlorobenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Dichlorodifluoromethane	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,1-Dichloroethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,2-Dichloroethane	ND	μg/L	1.0	I	V306G11A	7/11/2006	7/11/2006	JAS
1,1-Dichtoroethene	ND	μ g/ L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
cis-1,2-Dichloroethene	ND	μg/L	0.1	1	V306G11A	7/11/2006	7/11/2006	JAS
trans-1,2-Dichloroethene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,2-Dichloropropane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
cis-1,3-Dichloropropene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
trans-1,3-Dichloropropene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Ethylbenzene	ND	μg/L	1.0	i	V306G11A	7/11/2006	7/11/2006	JAS
Ethylene Dibromide	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
2-Hexanone	ND	μ g /L	50	1	V306G11A	7/11/2006	7/11/2006	JAS
Methyl Iodide	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Isopropylbenzene	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006 .	JAS
4-Methyl-2-pentanone	ND	μg/L	50	1	V306G11A	7/11/2006	7/11/2006	IAS

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-008

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP3-GW

Project Number:

PE52844

Client Sample Number:

8

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

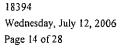
ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	8260B)		-1			1
Methylene Chloride	ND	μ g /L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
MTBE	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Naphthalene	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
n-Propylbenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Styrene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,1,1,2-Tetrachloroethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,1,2,2-Tetrachloroethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Tetrachloroethene	ND	μg/L	1.0	I	V306G11A	7/11/2006	7/11/2006	JAS
Toluene	ND	μg/L	0.1	1	V306G11A	7/11/2006	7/11/2006	JAS
1,2,4-Trichlorobenzene	ND	μg/L	5.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,1,1-Trichloroethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,1,2-Trichloroethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Trichloroethene	ND	μg/L	1.0	I	V306G11A	7/11/2006	7/11/2006	JAS
Trichlorofluoromethane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,2,3-Trichloropropane	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,2,4-Trimethylbenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
1,3,5-Trimethylbenzene	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Vinyl Chloride	ND	μg/L	1.0	1	V306G11A	7/11/2006	7/11/2006	JAS
Xylenes	ND	μg/L	3.0	1	V306G11A	7/11/2006	7/11/2006	JAS





Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-008A

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP3-GW

Project Number:

PE52844

Client Sample Number:

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

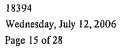
ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

	Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
	Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 35	35/EPA 8270C	<u> </u>					1
	Acenaphthene	ND	μg/L	5.0	l	41090	7/3/2006	7/5/2006	BDA
	Acenaphthylene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
	Anthracene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
	Benzo(a)anthracene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Benzo(a)pyrene	ND	μg/L	1.0	I	41090	7/3/2006	7/5/2006	BDA
	Benzo(b)fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Benzo(ghi)perylene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Benzo(k)fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Chrysene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Dibenzo(a,h)anthracene	ND	μ g /L,	2.0	1	41090	7/3/2006	7/5/2006	BDA
	Fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
	Fluorene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
	Indeno(1,2,3-cd)pyrene	ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
	2-Methylnaphthalene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
	Phenanthrene	ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
	Pyrene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA





Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-008B

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP3-GW

Project Number:

PE52844

Client Sample Number:

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

	Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	:
Le	ad by ICP/MS, Total (EPA 3005A/	EPA 6020)						· · · · · · · · · · · · · · · · · · ·		

Lead

μg/L

3.0

1

41107

7/5/2006

7/6/2006

ЛΗ



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-009

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP4-GW

Project Number:

PE52844

Client Sample Number:

.

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

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FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	8260B) (Sample p	oH = 8)				
Acetone	ND	μ g/ L	50	1	V906G06A	7/7/2006	7/7/2006	BJK
Acrylonitrile	ND	μ <u>υ</u> /L	2.0	i	V906G06A	7/7/2006	7/7/2006	BJK
Benzene	3,2	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromochloromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromodichloromethane	ND	μ g/ L	1.0	. 1	V906G06A	7/7/2006	7/7/2006	вјК
Bromoform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromomethane	ND	μg/L	5.0	ī	V906G06A	7/7/2006	7/7/2006	ВЈК
2-Butanone	ND	μg/L	25	1	V906G06A	7/7/2006	7/7/2006	ВЈК
n-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK.
sec-Butylbenzene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
tert-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Carbon Disulfide	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Carbon Tetrachloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Chlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Chloroethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Chloroform	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chloromethane	ND	μg/L	5.0	1 ·	V906G06A	7/7/2006	7/7/2006	ВЈК
2-Chlorotoluene	ND	μy/L	5.0	I	V906G06A	7/7/2006	7/7/2006	ВЈК
Dibromochloromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK

1914 Holloway Drive 7794 Boardwalk Road 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (248) 446-5700 T: (231) 775-8368



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-009

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP4-GW

Project Number:

PE52844

Client Sample Number:

.

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte =	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs	by GC/MS (EP	A 5030B/EPA	8260B) (Sample	pH = 8)				L.,
1,2-Dibromo-3-chloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Dibromomethane	ND	μg/L	5.0	i	V906G06A	7/7/2006	7/7/2006	BJK
1,2-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,3-Dichlorobenzene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
1,4-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Dichlorodifluoromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BIK
1,1-Dichloroethene	ND	μ g/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
cis-1,2-Dichloroethene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
trans-1,2-Dichloroethene	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	BJK
1,2-Dichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
cis-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
trans-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Ethylbenzene	4.7	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	BJK
Ethylene Dibromide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
2-Hexanone	ND	μg/L	50	ī	V906G06A	7/7/2006	7/7/2006	BJK
Methyl Iodide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Isopropylbenzene	ND	μg/L	5.0	I	V906G06A	7/7/2006	7/7/2006	ВЈК
4-Methyl-2-pentanone	ND	µg/L	50	1	V906G06A	7/7/2006	7/7/2006	вјК

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Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-009

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP4-GW

Project Number:

PE52844

Client Sample Number:

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA 8	3260B) (Sample	oH = 8)	1		<u> </u>	
Methylene Chloride	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
MTBE	ND	µg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Naphthalene	12	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
n-Propylbenzene	1.1	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	ВЈК
Styrene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,1,2-Tetrachloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,2,2-Tetrachloroethane	ND	μ g /Ն	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Tetrachloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Toluene	11	μg/L	1.0	İ	V906G06A	7/7/2006	7/7/2006	BJK
1,2,4-Trichlorobenzene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,I-Trichloroethane	ND	μg/Ľ	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,2-Trichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Trichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Trichlorofluoromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,2,3-Trichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2,4-Trimethylbenzene	13	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,3,5-Trimethylbenzene	4.6	μ g/ L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Vinyl Chloride	ND	μg/L	1.0	Ţ	V906G06A	7/7/2006	7/7/2006	вік
Xylenes	28	μg/L ·	3.0	1	V906G06A	7/7/2006	7/7/2006	BJK



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-009A

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP4-GW

Project Number:

PE52844

Client Sample Number:

9

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Aualyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 3	535/EPA 82700	C)					
Acenaphthene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Acenaphthylene	ND	μg/L	5.0	i	41090	7/3/2006	7/5/2006	BDA
Anthracene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(a)anthracene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(a)pyrene	ND	μg/L	1.0	I	41090	7/3/2006	7/5/2006	BDA
Benzo(b)fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(ghi)perylene	ND	μ g /L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(k)fluóranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Chrysene	ND	μ g/L	1.0	. 1	41090	7/3/2006	7/5/2006	BDA
Dibenzo(a,h)anthracene	ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
Fluoranthene	ND	μg/L	1.0	I	41090	7/3/2006	7/5/2006	BDA
Fluorene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Indeno(1,2,3-cd)pyrene	ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
2-Methylnaphthalene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Phenanthrene	ND	ր ց/ Լ	2.0	1	41090	7/3/2006	7/5/2006	BDA
Pyrene	ND	µg∕L	5.0	1	41090	7/3/2006	7/5/2006	BDA



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-009B

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

SP4-GW

Project Number:

PE52844

Client Sample Number:

9

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>-4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte Result Units Report Limit Dilution Factor Prep Batch Prep Date/Time Analysis Date/Time Analyst

Lead by ICP/MS, Total (EPA 3005A/EPA 6020)

Lead

30

μg/L

3.0

1

41107

7/5/2006

7/6/2006

ЛΗ



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-010

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

DUP-GW

Project Number:

PE52844

Client Sample Number:

10

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

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FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

 $\mathbf{E} = \mathbf{E}$ stimated value; $\mathbf{J} = \mathbf{A}$ nalyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	8260B)					
Acetone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	BJK
Acrylonitrile	ND	μg/L	2.0	i	V906G06A	7/7/2006	7/7/2006	BJK
Benzene	9.5	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromobenzene	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromochloromethane	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromodichloromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromoform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromomethane	ND	μg/L	5.0	i	V906G06A	7/7/2006	7/7/2006	вјк
2-Butanone	ND	μg/L	25	1	V906G06A	7/7/2006	7/7/2006	вјК
n-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
sec-Butylbenzene	1.3	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	вјк
tert-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Carbon Disulfide	ND	μg⁄L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Carbon Tetrachloride	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Chlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вік
Chloroethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Chloroform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chloromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
2-Chlorotoluene	ND	μg/L	5.0	I	V906G06A	7/7/2006	7/7/2006 I	ВЈК
Dibromochloromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006 F	ВЈК

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Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (248) 446-5700 T: (231) 775-8368



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-010

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

DUP-GW

Project Number:

PE52844

Client Sample Number:

10

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

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X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	8260B)		l		·	·!···
1,2-Dibromo-3-chloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Dibromomethane	ND	μg/L	5.0	Ī	V906G06A	7/7/2006	7/7/2006	BJK
1,2-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,3-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,4-Dichlorobenzene	ND	μ g /L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
Dichlorodifluoromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,2-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1-Dichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
cis-1,2-Dichloroethene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
trans-1,2-Dichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,2-Dichloropropane	ND	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	BJK
cis-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
trans-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Ethylbenzene	44	μ g/ L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
Ethylene Dibromide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
2-Hexanone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	вјк
Methyl Iodide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк.
Isopropylbenzene	5.0	μg/L	5.0	t	V906G06A	7/7/2006	7/7/2006	ВЈК
4-Methyl-2-pentanone	ND	μg/L	50	l	V906G06A	7/7/2006	7/7/2006	вјк



Client Identification:

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Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

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Sample Number:

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Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

DUP-GW

Project Number:

PE52844

Client Sample Number:

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Sample Date:

6/27/2006

Chain of Custody Number:

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Comments:

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E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

	Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
7	olatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	B260B)		t.,			J
	Methylene Chloride	ND	μg/L	5.0	i	V906G06A	7/7/2006	7/7/2006	BJK
1	MTBE	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	Naphthalene	140	μg/L	5.0	l	V906G06A	7/7/2006	7/7/2006	BJK
	n-Propylbenzene	10	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
	Styrene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,1,1,2-Tetrachloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
	1,1,2,2-Tetrachloroethane	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
	Tetrachloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјК
	Toluene	140	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	вјк
	1,2,4-Trichlorobenzene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,1,1-Trichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	1,1,2-Trichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	Trichloroethene	ND	μg/L	0.1	i	V906G06A	7/7/2006	7/7/2006	BJK
	Trichlorofluoromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјК
	1,2,3-Trichloropropane	ND	μ g/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјК
	1,2,4-Trimethylbenzene	110	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	вјК
	1,3,5-Trimethylbenzene	41	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
	Vinyl Chloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
	Xylenes	320	րջ/Լ	3.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-010A

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

DUP-GW

Project Number:

PE52844

Client Sample Number:

10

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

Definitions:

ND = Not Detected at or above the reporting limit; RL = Reporting Limit; NA = Not Applicable/Not Available

FF = Field Filtered; B = Analyte detected in blank; TIC = Tentatively Identified Compound;

E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarb	ons (PNAs) (EPA 35	35/EPA 8270)C)				.i	<u>-I</u>
Acenaphthene	9.1	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Acenaphthylene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Anthracene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(a)anthracene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(a)pyrene	ND	μg/L	1.0	I	41090	7/3/2006	7/5/2006	BDA
Benzo(b)fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(ghi)perylene	ND	μg∕L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Benzo(k)fluoranthene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Chrysene	ND	μg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Dibenzo(a,h)anthracene	ND	μg/L	2.0	1	41090	7/3/2006	7/5/2006	BDA
Fluoranthene	2.0	µg/L	1.0	1	41090	7/3/2006	7/5/2006	BDA
Fluorene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Indeno(1,2,3-cd)pyrene	ND	μg/L	2.0	I	41090	7/3/2006	7/5/2006	BDA
2-Methylnaphthalene	14	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA
Phenanthrene	7.9	μg/L	2.0	Ī	41090	7/3/2006	7/5/2006	BDA
Pyrene	ND	μg/L	5.0	1	41090	7/3/2006	7/5/2006	BDA



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-010B

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

DUP-GW

Project Number:

PE52844

Client Sample Number:

10

Sample Date:

6/27/2006

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 $\mathbf{E} = \mathbf{E}$ stimated value; $\mathbf{J} = \mathbf{A}$ nalyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Lead by ICP/MS, Total (EPA 3005A/	EPA 6020)							

Lead

31

μg/L

3.0

.

41107

7/5/2006

7/6/2006

ЛΗ



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-012

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

Trip Blank

Project Number:

PE52844

Client Sample Number:

12

Sample Date:

6/27/2006

Chain of Custody Number:

56608

Comments:

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E = Estimated value; J = Analyte positively identified - estimated value

X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs	by GC/MS (EP	A 5030B/EPA 8	3260B)					
Acetone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	BJK
Acrylonitrile	ND	μg/L	2.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Benzene	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromobenzene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromochloromethane	ND	μ g /L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Bromodichloromethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Bromoform	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
Bromomethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
2-Butanone	· ND	μg/L	25	1	V906G06A	7/7/2006	7/7/2006	BJK
n-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
sec-Butylbenzene	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
tert-Butylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	влк
Carbon Disulfide	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Carbon Tetrachloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chlorobenzene	ND	hg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chloroethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	вјК
Chloroform	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Chloromethane	ND	μg/L	5.0	I	V906G06A	7/7/2006	7/7/2006	вјк
2-Chlorotoluene	ND	μg/L	5.0	I	V906G06A	7/7/2006	7/7/2006	ВЈК
Dibromochloromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК

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T: (517) 699-0345 T: (248) 446-5700 T: (231) 775-8368



Client Identification:

Soil and Materials Engineers, Inc. -

Plymouth

Sample Matrix:

Ground Water

Fibertec Project Number:

18394

Sample Number:

18394-012

Client Sample Information

Project Identification:

26555 Northwestern Hwy

Client Sample Description:

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PE52844

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12

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X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EP	A 5030B/EPA	3260B)				<u> </u>	
1,2-Dibromo-3-chloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Dibromomethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2-Dichlorobenzene	ND	μg/L	1.0	I	V906G06A	7/7/2006	7/7/2006	BJK
1,3-Dichlorobenzene	ND	µg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,4-Dichlorobenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK.
Dichlorodifluoromethane	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1-Dichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2-Dichloroethane	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
I, I-Dichloroethene	ND	μg/L	1.0	į	V906G06A	7/7/2006	7/7/2006	ВЈК
cis-1,2-Dichloroethene	ND	μg/L	0.1	1	V906G06A	7/7/2006	7/7/2006	ВЈК
trans-1,2-Dichloroethene	ND	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2-Dichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	вјк
cis-1,3-Dichloropropene	ND	μg/L	1.0	ı	V906G06A	7/7/2006	7/7/2006	вјк.
trans-1,3-Dichloropropene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Ethylbenzene	ND	µg/L	1.0	ı	V906G06A	7/7/2006	7/7/2006	ВЈК
Ethylene Dibromide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
2-Hexanone	ND	μg/L	50	į	V906G06A	7/7/2006	7/7/2006	ВЈК
Methyl Iodide	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Isopropylbenzene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
4-Methyl-2-pentanone	ND	μg/L	50	1	V906G06A	7/7/2006	7/7/2006	вјк

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X - Spike recovery distorted due to elevated sample target analyte concentration (>=4X the amount spiked)

Y - Spike unrecoverable due to sample dilution.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs	by GC/MS (EP	A 5030B/EPA	8260B)					
Methylene Chloride	ND	μg/L	5.0	ī	V906G06A	7/7/2006	7/7/2006	BJK
2-Methylnaphthalene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
MTBE	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
Naphthalene	ND	μg/L	5.0	1	V906G06A	7/7/2006	7/7/2006	BJK
n-Propylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Styrene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,1,2-Tetrachloroethane	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,2,2-Tetrachloroethane	ND	μ g/ L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Tetrachloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Toluene	ND	μ g /L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2,4-Trichlorobenzene	ND	μg/L	5.0	ī	V906G06A	7/7/2006	7/7/2006	ВЈК
1,1,1-Trichloroethane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,1,2-Trichloroethane	ND	μg/L	1.0	i	V906G06A	7/7/2006	7/7/2006	BJK
Trichloroethene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Trichlorofluoromethane	ND	μ g/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,2,3-Trichloropropane	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
1,2,4-Trimethylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK
1,3,5-Trimethylbenzene	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	BJK .
Vinyl Chloride	ND	μg/L	1.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК
Xylenes	ND	μ g/ L	3.0	1	V906G06A	7/7/2006	7/7/2006	ВЈК

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Environmental Consulting & Technology, Inc.

May 25, 2007

Mr. Florencio De Avila Lexington Corporate Trust 101 East Erie Suite 950 Chicago, IL 60611

Subject: Underground Storage Tank Release Area Investigation Report

Federal-Mogul World Headquarters 26555 Northwestern Highway

Southfield, MI

Dear Mr. De Avila:

Enclosed is a copy of the Limited Phase II Environmental Site Assessment (ESA) completed by Environmental Consulting & Technology, Inc. (ECT) for the former underground storage tank (UST) area located at the Federal-Mogul World Headquarters, 26555 Northwestern Highway, Southfield, Michigan. The purpose of the Limited Phase II ESA is to determine the condition of the soil and groundwater in the vicinity of the former UST area and, if possible, submit a closure report. If conditions are such that closure cannot yet be satisfied, additional activities necessary to position the site for closure will be undertaken.

The enclosed report describes similar results to the previous investigation completed by Soil Materials Engineers, Inc. (SME). ECT will work with the Michigan Department of Environmental Quality (MDEQ) to determine if closure can be satisfied based on the existing data or if additional investigation data is necessary.

Federal-Mogul will initiate a telephone call with you and SME in the near future to discuss the results of this report and the next steps in the process. SME has also been sent a copy of this report. If you have any questions regarding this report and leading up to the telephone call, please do not hesitate to call me at 734-769-3004 or Mr. Mark Bauer representing Federal-Mogul at 248-354-8912.

2200 Commonwealth Boulevard, Ste 300 Ann Arbor, MI 48105

> (734) 769-3004

FAX (734) 769-3164

Sincerely,

Environmental Consulting & Technology, Inc.

John J. D'Addona, P.E.

Senior Engineer

Enclosure

C: Mark Bauer, Federal-Mogul Grant Gilezan, Dykema Gossett PLLC Mike Hebert, ECT Daniel Roeser, SME Roger Strelow, Federal-Mogul

Limited Phase II Environmental Site Assessment

Former Loading Dock Underground Storage Tank Area
Federal-Mogul Corporation
World Headquarters
26555 Northwestern Highway
Southfield, Michigan 48034

15 May 2007

PRIVILEGED AND CONFIDENTIAL AT THE REQUEST OF COUNSEL

Prepared for:

Federal-Mogul Corporation Southfield, Michigan

Presented by:

Environmental Consulting & Technology, Inc.

2200 Commonwealth Blvd, Suite 300 Ann Arbor, Michigan 48105 (734) 769-3004

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Figure 2 - Former UST Site Plan

Figure 3 - Former UST Groundwater Diagram

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Limited Phase II Environmental Site Assessment

Former Loading Dock Underground Storage Tank Area Federal-Mogul Corporation World Headquarters Southfield, Michigan

1.0 SUMMARY

Environmental Consulting & Technology, Inc. (ECT) has completed a Limited Phase II Environmental Site Assessment (ESA) in conformance with a Proposed Technical Scope-of-Work, dated 19 February 2007.

The object of the Limited Phase II ESA was to evaluate the potential impact from a former Underground Storage Tank System that was removed from the facility in 1986. Four (4) soil borings were performed at locations referenced as (MW-1 through MW-4). These borings were primarily advanced until groundwater was encountered. In addition, MW-1 was advanced to 20 feet below ground level (bgl) or an estimated 15-17 below the first saturated interval to define the vertical extent of potential impact and to provide further information concerning the local geological formation below the saturated interval.

ECT installed four monitoring wells (MW-1 through MW-4) at the Study Area to aid in delineating and monitoring the horizontal extent of potential groundwater impact. Groundwater samples were collected, preserved, handled, and tested in accordance with Michigan Department of Environmental Quality protocols and Operational Memorandum 2. These specified samples were submitted under standard Chain-of-Custody protocols to RTI Laboratories, Inc. for analysis in accordance with Metals/Lead, ICP/MS SW6020A, Polynuclear Aromatic Hydrocarbons, SW8310, and Volatile Organic Compounds - ULG List, SW8260B.

The groundwater sampling results reported above the Part 201/213 Generic Residential and/or Commercial Cleanup Criteria and Screening Levels, as amended 23 January 2006, are summarized in the following table:

Location	Constituent	Reported Level (ug/L)	Residential Criteria/Level (ug/L)	Commercial II Criteria/Level (ug/L)
MW-1	Fluoranthene	4.4	GSI - 1.6	GSI - 1.6
	Naphthalene	160	GSI - 13	GSI - 13
	Phenanthrene	13	GSI - 2.4	GSI - 2.4
	1,2,4-TMB	97	GSI - 17	GSI - 17
			DW - 63	DW - 63
	Benzene	8.5	DW - 5	DW - 5
	Ethylbenzene	20	GSI -18	GSI - 18
	Xylene	160	GSI - 35	GSI - 35
MW-2	Xylene	42	GSI - 35	GSI - 35
	Lead	13	DW - 4	DW - 4
MW-4	Lead	6	DW - 4	DW - 4

Groundwater to Surface Water Interface Criteria (GSI) Drinking Water Criteria (DW)

Depth-to-water was measured at each well location using a calibrated electronic water level indicator. These measurements were used to calculate a groundwater diagram/potentiometric map. The posted data suggest that the shallow groundwater flow across the Study Area is in a southwesterly direction. The data also supports the groundwater gradient of 0.06 ft/ft.

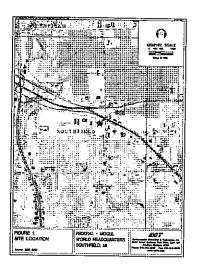
2.0 INTRODUCTION

2.1 Scope of Services

Environmental Consulting & Technology, Inc. (ECT) was retained by the Federal-Mogul Corporation (referenced herein as the "Federal-Mogul") to perform a Limited Phase II Environmental Site Assessment (ESA) for the following specified area, hereafter referenced as the "Study Area". The Limited Phase II ESA included an audit of previous environmental investigations and a subsurface investigation of the Former Loading Dock Underground Storage Tank (UST) area.

Former Loading Dock Underground Storage Tank Federal-Mogul Corporation, World Headquarters 26555 Northwestern Highway Southfield, Michigan 48034

Section 21, T1N-R10E, Oakland County, Michigan



The following figures are presented for further understanding of the Study Area:

Figure 1 Site Location

Figure 2 Former UST Site Plan

Figure 3 Former UST Groundwater Diagram

2.2 Purpose

The purpose of this Limited Phase II ESA was to identify and document any potential recognized environmental conditions (RECs) associated with the Study Area.

2.3 Previous Environmental Investigations

As authorized, ECT has conducted a file audit with respect to the aforementioned Study Area. This audit was primarily conducted in order to design a technical approach to evaluate the Study Area with respect to compliance with the Michigan Department of Environmental Quality (MDEQ) *Part 213 regulations, defined hereafter as the Leaking Underground Storage Tanks Regulation, Natural Resources and Environmental Protection Act, 1994 P.A. 451, as amended (NREPA)*. The file audit was conducted under the conditions specified by legal council and were restricted to the audit team supervised by Michael T. Hebert, CPG, CHMM, PG, CUSTP Environmental Professional (Credential No CP-588). In addition to the files and databases reviewed, a physical inspection of the Study Area was also conducted on 18 January 2007. The following audit summary is herein presented to justify the response actions undertaken as detailed in ECT's Proposed Technical Scope-of-Work, dated 19 February 2007.

AUDIT SUMMARY

The following documents were made available for ECT's review:

11-30-06

Letter (Federal Southfield Limited Partnership/Florencio De Avila)

11-22-06

Phase II Report (Soil Materials Engineers, Inc. {SME}/Daniel O. Roeser &

Mark J. Quimby).

The Underground Storage Tank System (UST) information was obtained from these documents and databases reviewed.

Tank Capacity	Last Reported Content	Activity Taken/Year	Regulated Tank
2,000-gallon	Unleaded Gasoline	Removed/1986	No – Prior to 1988

During 2006, soil samples collected by SME on behalf of the owner of the property (Federal Southfield Limited Partnership) from the Study Area were field screened and defined as being impacted with volatile organics (gasoline constituents). Analytical data generated from the analysis of the soil samples were reported to have levels of 1,2,4-trimethylbenzene (1,2,4-TMB), 1,3,5-trimethylbenzene (1,3,5-TMB), and total xylenes above the soil criteria protective of the residential drinking water pathway. In addition, ethylbenzene, naphthalene, 1,2,4-TMB, 1,3,5-TMB, and total xylenes were also reported in the soils at levels above the residential criteria protective of the Groundwater to Surface Water Interface Criteria (GSI).

As documented in the boring logs presented in the aforementioned Phase II Report, the referenced soil samples were collected from below the apparent top of the water table. Therefore, these soil samples were from the saturated zone and are consequently considered screening samples for determining if volatile organic were present in the zone sampled.

Four groundwater samples were collected using temporary sample points and submitted for analysis. One groundwater sample (SP-1) reported benzene, 1,2,4-TMB, total xylenes and lead at levels exceeding the Drinking Water Ingestion Criteria (DW). Ethylbenzene, naphthalene, 1,2,4-TMB, total xylene, fluoranthene, phenanthrene and dissolved phase lead were also reported in this groundwater sample at levels exceeding the Residential GSI Criteria.

Groundwater Quality Data - Reported Above Commercial II Criteria

Location	Constituent	Reported Level (ug/L)	Residential Criteria/Level (ug/L)	Commercial II Criteria/Level (ug/L)
SP-1	Fluoranthene	2	GSI - 1.6	GSI - 1.6
	Naphthalene	160	GSI - 13	GSI - 13
	Phenanthrene	7.7	GSI - 2.4	GSI - 2.4
	1,2,4-TMB	140	GSI - 17	GSI - 17
			DW - 63	DW - 63
	1,3,5-TMB	51	GSI-45	GSI-45
	Benzene	10	DW - 5	DW - 5
	Ethylbenzene	50	GSI -18	GSI - 18
	Xylene	370	GSI - 35	GSI - 35
			DW - 280	DW - 280
	Lead	23	GSI - 16	GSI - 16
			DW - 4	DW - 4

The collection of groundwater samples using a Geoprobe or a temporary sample point is considered an initial groundwater collection method strictly for determining the potential for contamination, which was presumed to be the intent of the aforementioned Phase II investigation conducted by SME.

The potential release area is limited to public access; current property zoning is consistent with the Commercial II or III scenarios and concrete structures are in the immediate area that will limit future uncontrolled exposure to the suspected released chemicals of concern (COC).

3.0 SUBSURFACE WORK COMPLETED

3.1 Field Screening & Soil Boring Advancement

Soil borings were advanced using 4¼-inch inner diameter hollow-stem augers (HAS) and samples were retrieved using a Geoprobe in order to retain undisturbed soil prior to advancing the HAS. Four (4) soil borings were performed at locations referenced as (MW-1 through MW-4). Information pertaining to the specific location of the borings is provided in Figure 2 – Former UST Site Plan. Individual soil boring logs are presented as Appendix A. Soil samples were retrieved continuously during advancement of each soil boring. Retrieved soil samples were collected in continuous increments and field-screened utilizing a calibrated Organic Vapor Meter (OVM). The soils encountered at each boring were classified and logged in accordance with the Unified Soil Classification System. OVM screening responses for each interval retrieved is provided on the individual soil boring logs.

The borings were primarily advanced until groundwater was encountered. In addition, MW-1 was advanced to 20 feet below ground level (bgl) or an estimated 15-17 below the first saturated interval to define the vertical extent of potential impact and to provide further information concerning the local geological formation below the saturated interval. In this boring the sample retrieved from the interval of 18-19 feet was designated as sample (SB-1, MW-1 @ 18-19 ft). This soil sample was collected, preserved, field-screened, handled, and tested in accordance with Michigan Department of Environmental Quality (MDEQ) protocols and Operational Memorandum 2. This specified sample was submitted under standard Chain-of-Custody protocols to RTI Laboratories, Inc. (RTI) for analysis in accordance with Metals/Lead, ICP/MS SW6020A, Polynuclear Aromatic Hydrocarbons Semi-Volatile Organic Compounds, SW8270C, Volatile Organic Compounds - ULG List, SW8260B and Percent Moisture, D2216. A copy of the RTI Analytical Report is presented as Appendix B. A copy of the Chain-of-Custody Record is provided as Appendix C.

3.2 Monitoring Well Installation

ECT installed four monitoring wells (MW-1 through MW-4) at the Study Area to aid in delineating and monitoring the horizontal extent of potential groundwater impact. A monitoring well was constructed in each boring advanced by the HSA. All displaced soil cuttings were containerized in Department of Transportation approved 55-gallon drums and were later transported off-site for disposal by Federal-Mogul under separate contract authorization. All monitoring wells were constructed using 2-inch diameter, Schedule 40 PVC casing and five-foot lengths of #0.010 slot PVC screens. Monitoring well screens were positioned so as to straddle the surface of the water table and accommodate natural water table fluctuation. Filter sand (sand Pack) was placed around the annulus of each monitoring well screen to at least one foot above/below the screened interval. Granular bentonite (Hole Plug) was then placed to fill the remaining borehole. Each well casing was cut off not more than ½-foot bgl and equipped with an expandable locking cap. A flush-mount protective cover was placed in a concrete pad surrounding each monitoring well casing. Monitoring well locations are depicted in Figure 2 - Former UST Site Plan. Monitoring well construction details are depicted in the corresponding soil boring logs provided in Appendix A.

Following the completion of monitoring well construction activities, each well was developed using a peristaltic pump.

3.3 Decontamination Procedures

All down-hole equipment was decontaminated between boreholes utilizing high-pressure water cleaning equipment and/or a solution of non-phosphatic detergent followed by a potable water rinse. Equipment decontaminated by high pressure cleaning was placed in a plastic containment tub to capture potentially impacted rinse water. All decontamination fluids and solids were subsequently transferred into 55-gallon drums containing the associated

monitoring well drill cuttings and staged for proper disposal. Small sampling tools were decontaminated by washing in a solution of non-phosphate detergent followed by a distilled water rinse. All down-hole equipment was decontaminated between boreholes.

3.4 Survey of Monitoring Well Locations and Elevations

The horizontal location of each monitoring well (MW-1 through MW-4) was surveyed by ECT relative to existing structure and illustrated on Figure 2 – Former UST Site Plan. The vertical elevation of each top of casing (TOC) elevation was surveyed relative to a known National Geodetic Vertical Datum (NGVD) point identified on existing utility diagrams provided by Federal-Mogul. The following table summarizes the vertical elevation data for each on the established monitoring points:

Monitoring Point	TOC Elevation (FT)	
MW-1	670.75	
MW-2	671.06	
MW-3	685.89	
MW-4	684.68	

The Study Area is located in the base of a loading dock/building belowground parking entrance. The concrete wall shown in Figure 2 – Former UST Site Plan represents a vertical relief between the surrounding landscaped portions of the property that support MW-3 and MW-4 and the asphalt ramp, base of the loading dock/building parking entrance that support MW-1 and MW-2.

A sealed storm sewer basin designed to divert surface water from the top of the asphalt cover in the base of the loading dock/building parking entrance was also surveyed to provide information concerning potential pathway evaluation:

Monitoring Point	TOC Elevation (FT)
Storm Water Basin	670.66

3.5 Potentiometric Measurements

All wells opened and allowed to equilibrate (3 measurements at ½ hour increments) prior to initiating well purging activities, after the water levels had equilibrated the depth-to-water was measured at each well location using a calibrated electronic water level indicator. These measurements were used to calculate a groundwater diagram/potentiometric map, provided as Figure 3 – Former UST Groundwater Diagram. The data suggest that shallow groundwater flow across the Study Area is in a southwesterly direction. The data also supports the groundwater gradient of 0.06 ft/ft.

3.6 Groundwater Sampling

All wells were opened and allowed to equilibrate. Groundwater samples were collected, preserved, handled, and tested in accordance with Michigan Department of Environmental Quality (MDEQ) protocols and Operational Memorandum 2. The specified samples were submitted under standard Chain-of-Custody protocols to RTI for analysis in accordance with Metals/Lead, ICP/MS SW6020A, Polynuclear Aromatic Hydrocarbons, SW8310, and Volatile Organic Compounds - ULG List, SW8260B. A copy of the RTI Analytical Report is presented as Appendix B. A copy of the Chain-of-Custody Record is provided as Appendix C.

4.0 **SUMMARY OF REPORTED DATA**

4.1 **Groundwater Quality Data**

The groundwater sampling results reported above the Part 201/213 Generic Residential and/or Commercial Cleanup Criteria and Screening Levels, as amended 23 January 2006, are summarized in the following tables.

Location	Constituent	Reported Level (ug/L)	Residential Criteria/Level (ug/L)	Commercial II Criteria/Level (ug/L)
MW-1	Fluoranthene	4.4	GSI - 1.6	GSI - 1.6
	Naphthalene	160	GSI - 13	GSI - 13
	Phenanthrene	13	GSI - 2.4	GSI - 2.4
	1,2,4-TMB	97	GSI - 17	GSI - 17
			DW - 63	DW - 63
	Benzene	8.5	DW - 5	DW – 5
	Ethylbenzene	20	GSI -18	GSI - 18
	Xylene	160	GSI - 35	GSI - 35
MW-2	Xylene	42	GSI - 35	GSI - 35
	Lead	13	DW - 4	DW – 4
MW-4	Lead	6	DW - 4	DW - 4

Groundwater to Surface Water Interface Criteria (GSI)

Drinking Water Criteria (DW)

The one groundwater sample (SP-1) historically collected by SME reported the following constituents:

Groundwater Quality Data - Reported Above Commercial II Critoria

Location	Constituent	Reported Level	Residential Criteria/Level	Commercial II Criteria/Level (ug/L)
		(ug/L)	(ug/L)	
SP-1	Fluoranthene	2	GSI - 1.6	GSI - 1.6
	Naphthalene	160	GSI - 13	GSI - 13
	Phenanthrene	7.7	GSI - 2.4	GSI - 2.4
	1,2,4-TMB	140	GSI - 17	GSI - 17
			DW - 63	DW - 63
	1,3,5-TMB	51	GSI-45	GSI-45
	Benzene	10	DW - 5	DW - 5
	Ethylbenzene	50	GSI -18	GSI - 18
	Xylene	370	GSI - 35	GSI - 35
	<u>:</u>		DW - 280	DW - 280
	Lead	23	GSI - 16	GSI - 16
		j	DW - 4	DW - 4

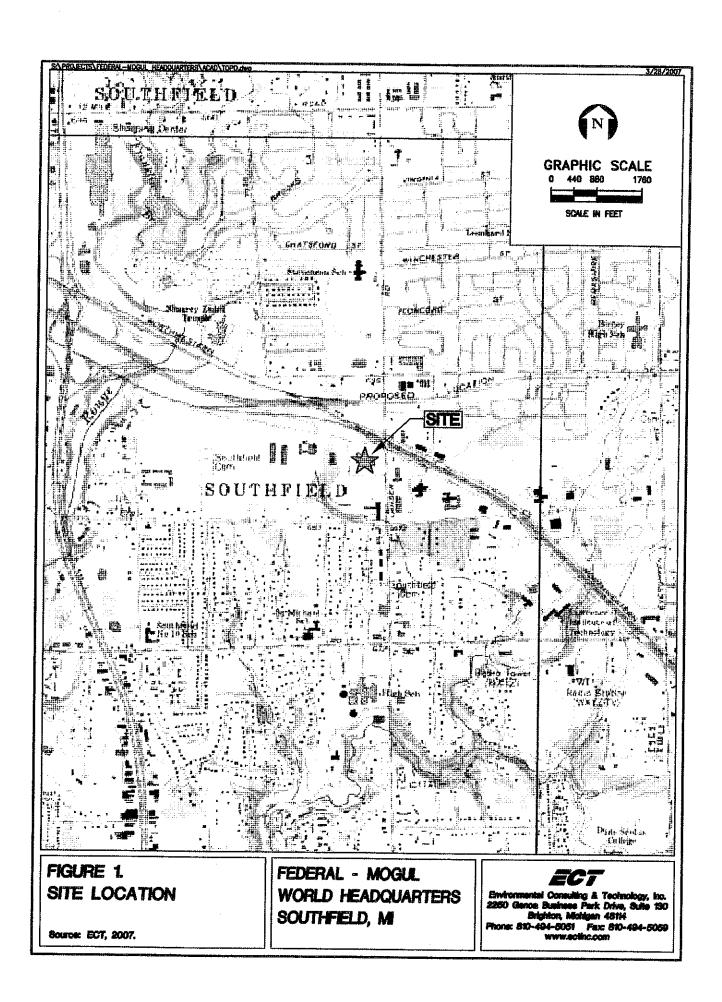
The water samples designated as SP-1 and MW-1 were both collected in the former UST location, and represent relatively the same constituents at similar concentrations.

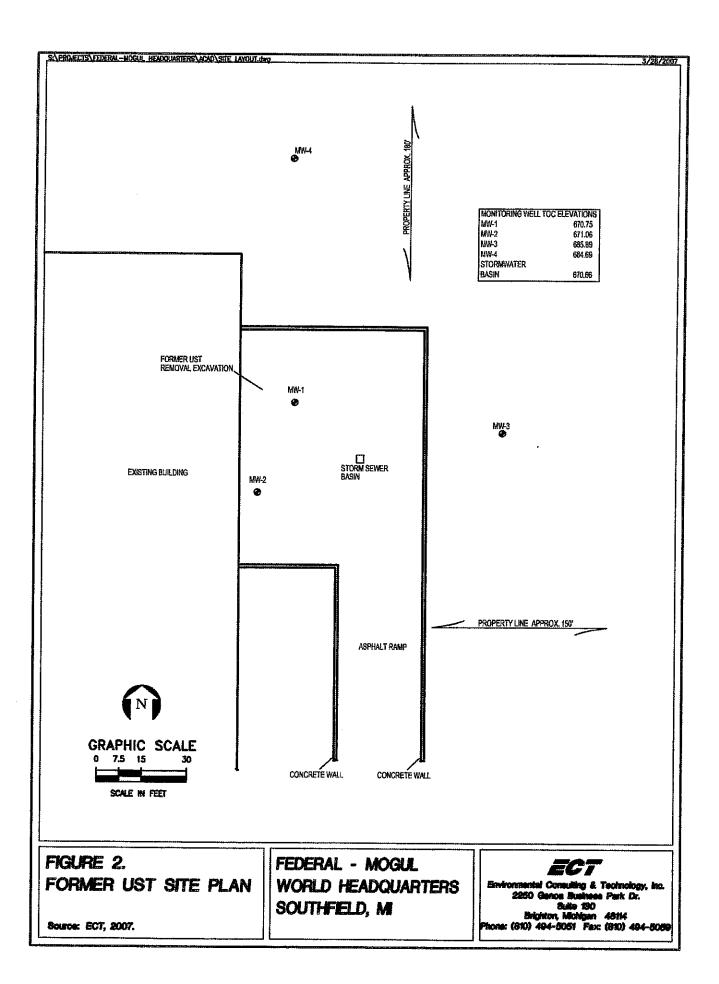
In addition to the groundwater samples a water sample was collected from inside the storm water catch basin. Analytical data supports that the water in the basin is not impacted above the Generic Residential and/or Commercial Cleanup Criteria and Screening Levels, as amended 23 January 2006.

4.2 Soil Quality Data

Field screening with the calibrated OVM did not support that residual levels are present in the Study Area above the method detection limit of the OVM (1 part per million). As stated in Section 3.1, the boring at location MW-1 was advanced to 20 feet bgl or an estimated 15-17 below the first saturated interval to define the vertical extent of potential impact and to provide further information concerning the local geological formation below the saturated interval. This sample was collected from a silty clay interval below the saturated zone that did not support groundwater. Analysis of said soil sample did not contain constituents above the referenced criteria, thereby defining the vertical distribution of contamination at the area that supported the highest level of residual contamination.

FIGURES





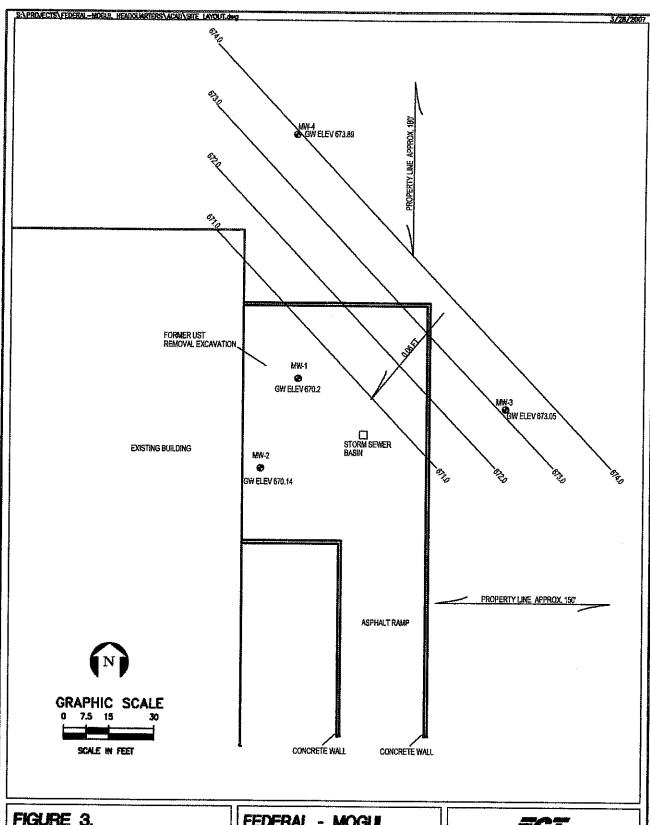
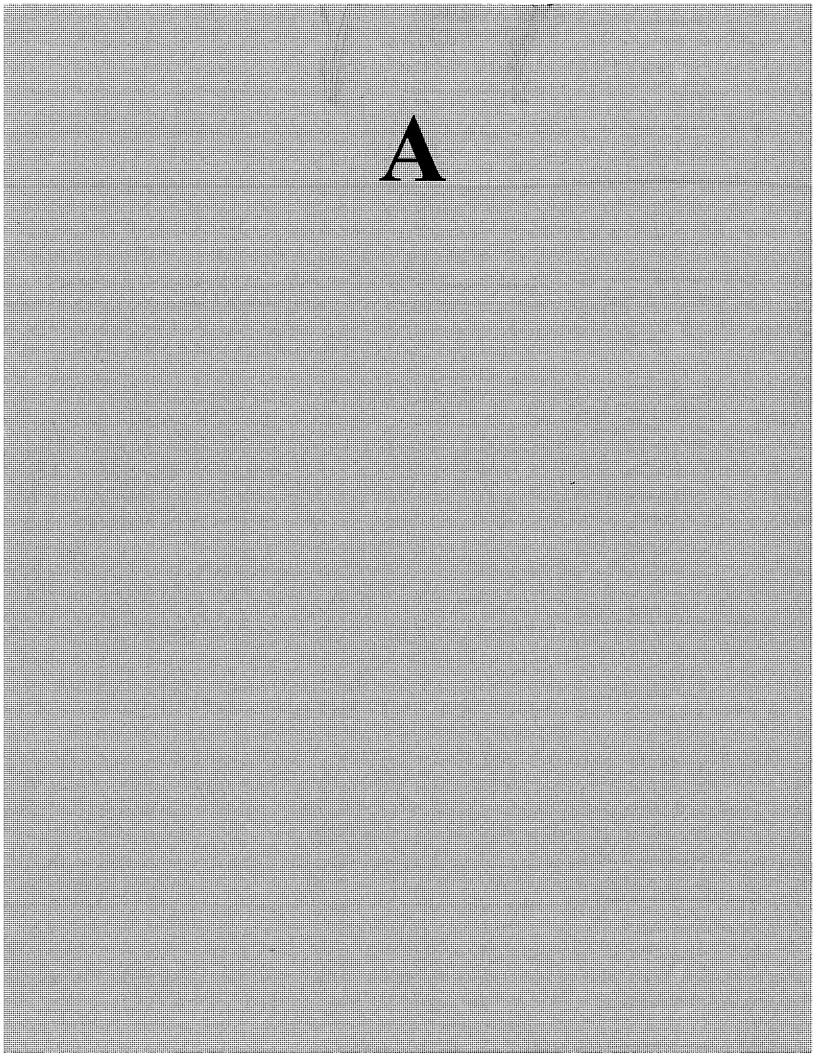


FIGURE 3.
FORMER UST
GROUNDWATER DIAGRAM
80uros: ECT, 2007.

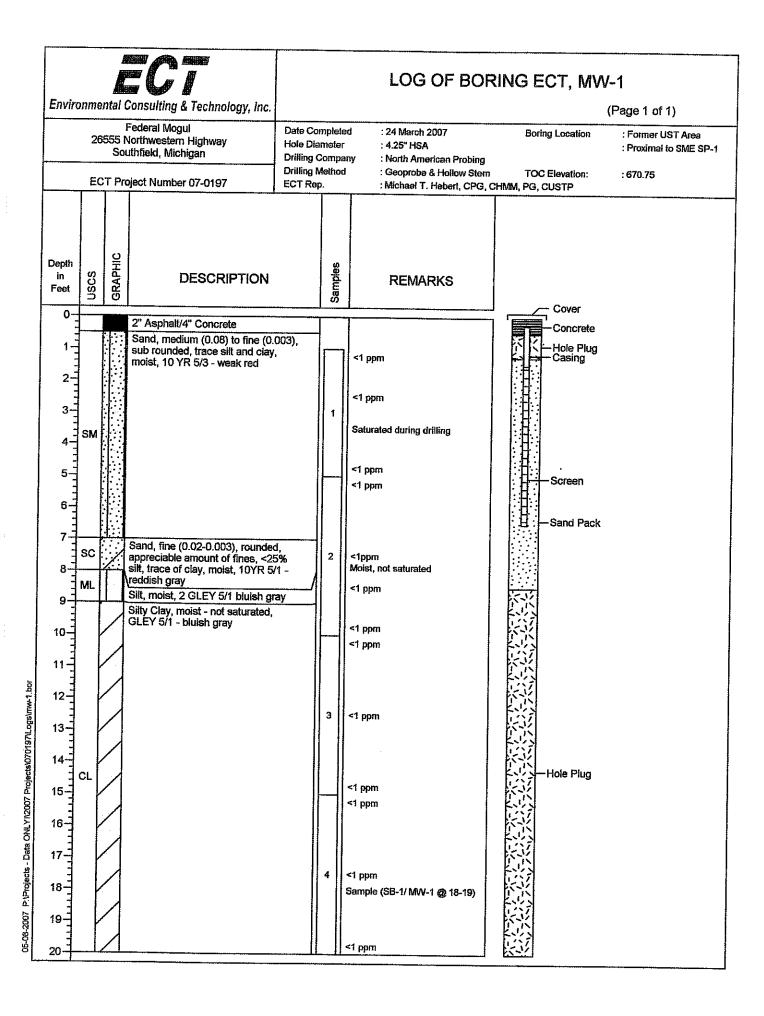
FEDERAL - MOGUL WORLD HEADQUARTERS SOUTHFIELD, MI

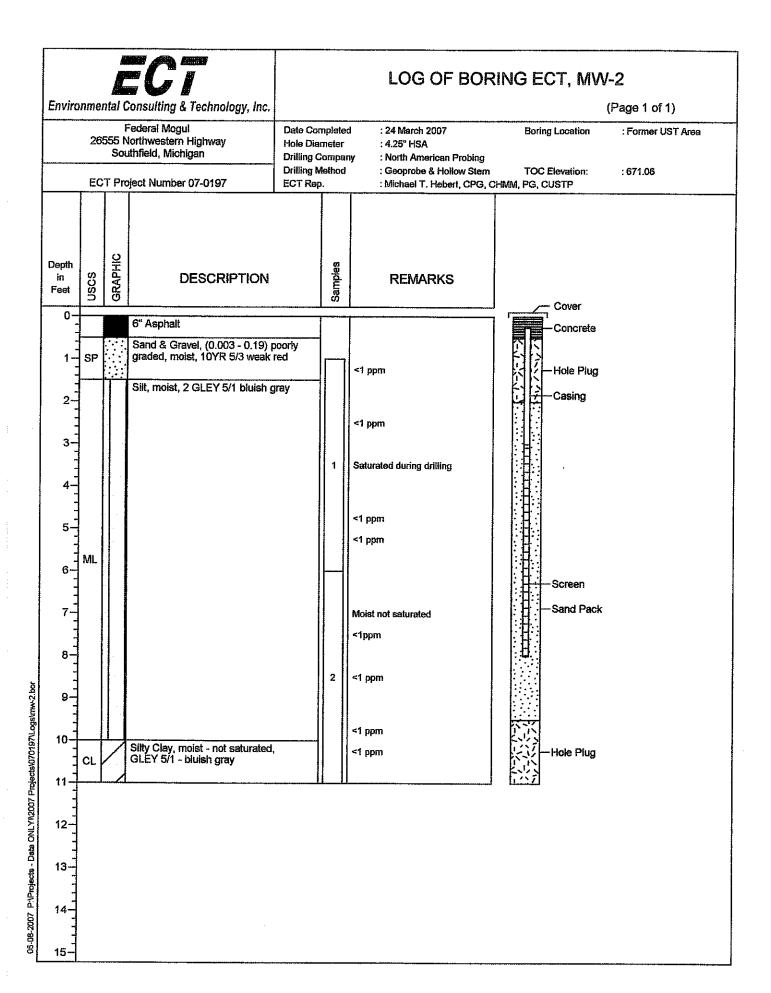
Environmental Consulting & Technology, Inc. 2250 Genou Businese Park Dr. Suite 190 Brighton, Michigan 48114 hone: (810) 494-5051 Fax: (810) 494-5059

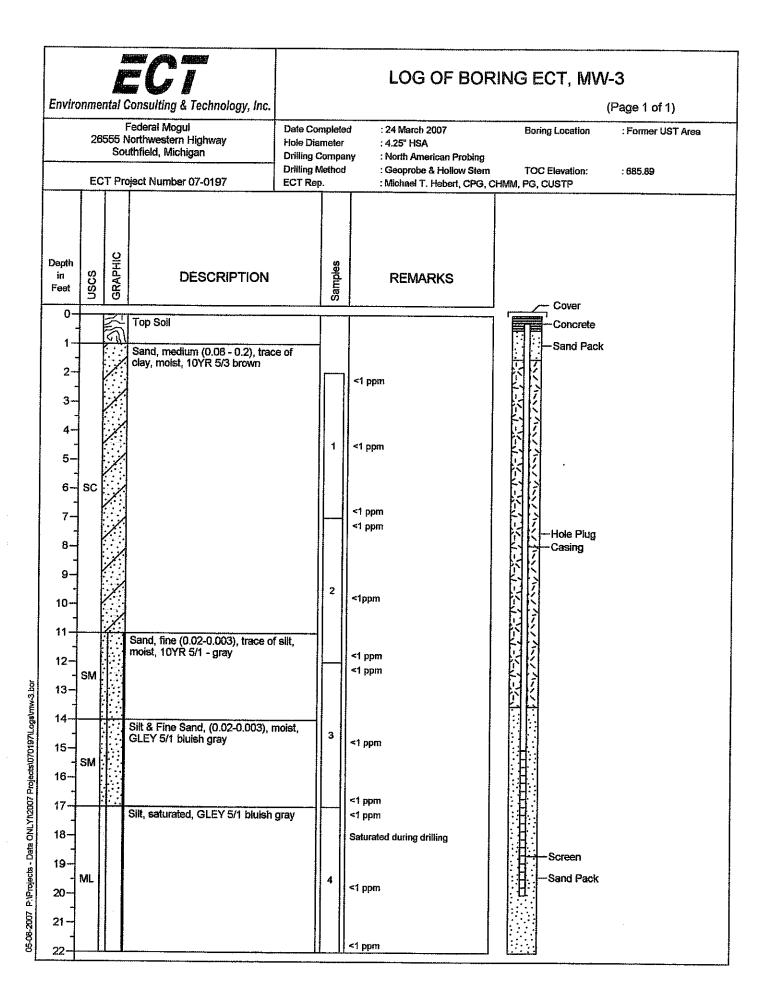


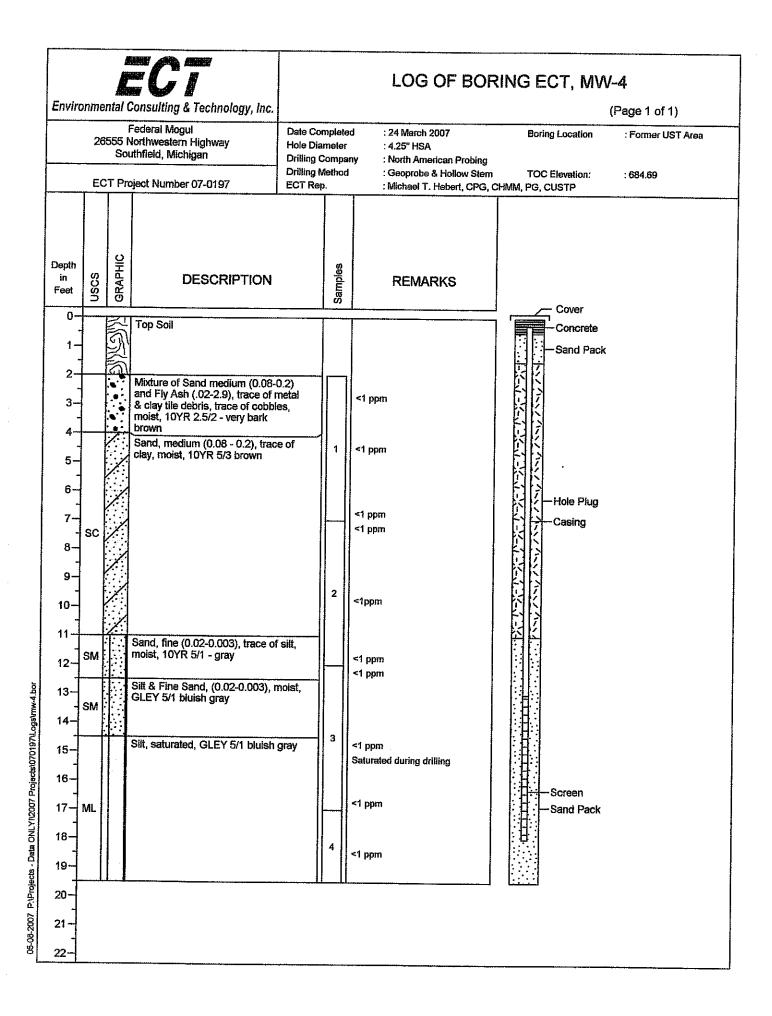
APPENDIX A

Log-of-Borings









APPENDIX B

RTI Analytical Report



Case Narrative

WO#:

0703805

Date:

4/4/2007

CLIENT:

Environmental Consulting & Technology, I

Project:

Federal Mogul #07-0197

This report in its entirety consists of the documents listed below. All documents contain the RTI Work Order Number assigned to this report.

- 1. Paginated Report including: Case Narrative, Analytical Results and Applicable Quality Control Summary Reports.
 - 2. A Cover Letter that immediately precedes the Paginated Report.
 - 3. Paginated copies of the Chain of Custody Documents supplied with this sample set.

Concentrations reported with a J flag in the Qual field are values below the reporting limit (RL) but greater than the established method detection limit (MDL). There is greater uncertainty associated with these results and data should be considered as estimated.

Concentrations reported with an E flag in the Qual field are values that exceed the upper quantification range. There is greater uncertainty associated with these results and data should be considered as estimated.

Any comments or problems with the analytical events associated with this report are noted below.

DNI - Did not ignite.



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422.8000 FAX: 734.422.5342 Website: www.rtilab.com

Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Project:

Collection Date: 3/24/2007 8:45:00 AM

Federal Mogul #07-0197

Matrix: SOIL

Lab ID:

0703805-001

Client Sample ID SB-1, MW-1 @ 18-19ft.

Analyses	Result	RL	Qual Units	DF	Date Analyzed
METALS, ICP/MS			SW602	20A	Analyst: AB2
Lead	3,900	1,100	μg/Kg-dry	10	3/29/2007 3:26:11 PM
POLYNUCLEAR AROMATIC HYD SEMI-VOLATILE ORGANIC COMP			SW827	'0C	Analyst: MT3
2-Methylnaphthalene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Acenaphthene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Acenaphthylene	ND	180	μg/Kg-dry	1	, 4/3/2007 11:35:00 PM
Anthracene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Benz(a)anthracene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Benzo(a)pyrene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Benzo(b)fluoranthene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Benzo(g,h,i)perylene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Benzo(k)fluoranthene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Chrysene	ND	180	µg/Kg-dry	1	4/3/2007 11:35:00 PM
Dibenz(a,h)anthracene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Fluoranthene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Fluorene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Indeno(1,2,3-cd)pyrene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Naphthalene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Phenanthrene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Pyrene	ND	180	μg/Kg-dry	1	4/3/2007 11:35:00 PM
Surr: 2,4,6-Tribromophenol	82.3	25-93.9	%REC	1	4/3/2007 11:35:00 PM
Surr: 2-Fluorobiphenyl	85.0	26-105	%REC	1	4/3/2007 11:35:00 PM
Surr: 2-Fluorophenol	86.8	25-120	%REC	1	4/3/2007 11:35:00 PM
Surr: Nitrobenzene-d5	82.5	30.1-104	%REC	1	4/3/2007 11:35:00 PM
Surr: Phenol-d5	77.9	25-118	%REC	1	4/3/2007 11:35:00 PM
Surr: Terphenyl-d14	89.1	27.1-115	%REC	1	4/3/2007 11:35:00 PM
VOLATILE ORGANIC COMPOUNE VOLATILE ORGANIC COMPOUNE			SW826	10B	Analyst: JW
1,2,3-Trimethylbenzene	ND	58	μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
1,2,4-Trimethylbenzene	ND	58	μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
1,3,5-Trimethylbenzene	ND	58	μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
2-Methylnaphthalene	· ND	290	μg/Kg-dry	50.6	4/3/2007 6:31:00 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level
- Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response
- RLReporting Detection Limit

Page 2 of 37



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Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/24/2007 8:45:00 AM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-001

Matrix: SOIL

Client Sample ID SB-1, MW-1 @ 18-19ft.

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS VOLATILE ORGANIC COMPOUNDS				SW826	0B	Analyst: JW
Benzene	ND	58		µg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Ethylbenzene	42	58	J	μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Isopropylbenzene	ND	58		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Methyl tert-butyl ether	ND	290		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Naphthalene	ND	290		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
n-Propylbenzene	ND	58		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Toluene	200	58		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Xylenes, Total	200	170		μg/Kg-dry	50.6	4/3/2007 6:31:00 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%REC	50.6	4/3/2007 6:31:00 PM
Surr: Dibromofluoromethane	91.1	70-130		%REC	50.6	4/3/2007 6:31:00 PM
Surr: Toluene-d8	93.0	70-130		%REC	50.6	4/3/2007 6:31:00 PM
VOLATILE ORGANIC COMPOUNDS PERCENT MOISTURE	S - ULG LIST			D2216	6	Analyst: VD
Percent Moisture	13	1.0		wt%	1	3/28/2007 10:00:00 AM

n	1:4:	
ւ սն	lifiers:	

- */X Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response Μ
- Reporting Detection Limit

Page 3 of 37



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Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

CLIENT:

Environmental Consulting & Technology, Inc.

4/4/2007

Project:

Collection Date: 3/24/2007 5:00:00 PM

Federal Mogul #07-0197

Lab ID:

0703805-002

Matrix: SOIL

Client Sample ID Waste Char

Analyses	Result		Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS - BT VOLATILE ORGANIC COMPOUNDS	EX			SW8260	В	Analyst: JW
Benzene	34	56	J	μg/Kg-dry	49	4/3/2007 2:43:00 AM
Ethylbenzene	370	56		µg/Kg-dry	49	4/3/2007 2:43:00 AM
Methyl tert-butyl ether	ND	280		ug/Kg-dry	49	4/3/2007 2:43:00 AM
Toluene	650	56		µg/Kg-dry	49	4/3/2007 2:43:00 AM
Xylenes, Total	3,000	170		µg/Kg-dry	49	4/3/2007 2:43:00 AM
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	49	4/3/2007 2:43:00 AM
Surr: Dibromofluoromethane	87.4	70-130		%REC	49	. 4/3/2007 2:43:00 AM
Surr: Toluene-d8	97.4	70-130		%REC	49	4/3/2007 2:43:00 AM
VOLATILE ORGANIC COMPOUNDS - BT PERCENT MOISTURE			D2216		Analyst: VD	
Percent Moisture	12	1.0		wt%	1	3/28/2007 10:00:00 AM
IGNITABILITY				SW1030)	Analyst: JE
Ignitability	DNI	0.11		mm/sec-dry	1	4/2/2007

Qualifiers:

*/X Value exceeds Maximum Contaminant Level

Ε Value above quantitation range

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Manual Integration used to determine area response М

Reporting Detection Limit

Page 4 of 37



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Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Federal Mogul #07-0197

Project:

Lab ID:

0703805-003

Client Sample ID MW-2

Matrix: GROUNDWATER

Collection Date: 3/25/2007 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HY	DROCARBONS			SW8	310	Analyst: MB
2-Methylnaphthalene	1.3	1.0		μg/L	1	3/29/2007 3:41:10 AM
Acenaphthene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Acenaphthylene	ND	1.0		µg/L	1	3/29/2007 3:41:10 AM
Anthracene	0.081	1.0	J	μg/L	1	3/29/2007 3:41:10 AM
Benz(a)anthracene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Benzo(a)pyrene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Benzo(b)fluoranthene	ND	1.0		μg/L	1	. 3/29/2007 3:41:10 AM
Benzo(g,h,i)perylene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Benzo(k)fluoranthene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Chrysene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Dibenz(a,h)anthracene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Fluoranthene	0.49	1.0	J	µg/L	. 1	3/29/2007 3:41:10 AM
Fluorene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Indeno(1,2,3-cd)pyrene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Naphthalene	NÐ	1.0		μg/L.	1	3/29/2007 3:41:10 AM
Phenanthrene	0.66	1.0	J	μg/L	1	3/29/2007 3:41:10 AM
Pyrene	ND	1.0		μg/L	1	3/29/2007 3:41:10 AM
Surr: p-Terphenyl	94.7	70-130		%REC	1	3/29/2007 3:41:10 AM
METALS, ICP/MS				SW6020A		Analyst: AV
Lead	13	1.0		μg/L	5	3/28/2007 1:12:39 PM
VOLATILE ORGANIC COMPOUI VOLATILE ORGANIC COMPOUI	NDS - ULG LIST NDS			SW82	60B	Analyst: JW
1,2,3-Trimethylbenzene	ND	1.0		μg/L	1	3/30/2007 8:34:00 PM
1,2,4-Trimethylbenzene	0.60	1.0	J	µg/L	1	3/30/2007 8:34:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2007 8:34:00 PM
2-Methylnaphthalene	ND	5.0		μg/L	1	3/30/2007 8:34:00 PM
Benzene	0.60	1.0	J	µg/L	1	3/30/2007 8:34:00 PM
Ethylbenzene	5.7	1.0	-	μg/L	1	3/30/2007 8:34:00 PM
Isopropylbenzene	ND	1.0		μg/L	1	3/30/2007 8:34:00 PM
Methyl tert-butyl ether	ND	5.0		μg/L	1	3/30/2007 8:34:00 PM
Naphthalene	11	5.0		µg/L	1	3/30/2007 8:34:00 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level
- Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RLReporting Detection Limit

Page 5 of 37



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FAX: 734.422.5342 Website: www.rtilab.com

Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/25/2007 10:45:00 AM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-003

Client Sample ID MW-2

Matrix: GROUNDWATER

Analyses	Result		al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND VOLATILE ORGANIC COMPOUND			SW82	60B	Analyst: JW
n-Propylbenzene	ND	1.0	µg/L	1	3/30/2007 8:34:00 PM
Toluene	5.0	1.0	μg/L	1	3/30/2007 8:34:00 PM
Xylenes, Total	42	3.0	μg/L	1	3/30/2007 8:34:00 PM
Surr: 4-Bromofluorobenzene	109	70-130	%REC	1	3/30/2007 8:34:00 PM
Surr: Dibromofluoromethane	109	70-130	%REC	1	3/30/2007 8:34:00 PM
Surr: Toluene-d8	107	70-130	%REC	1	3/30/2007 8:34:00 PM

- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

Page 6 of 37



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422.8000 FAX: 734.422.5342 Website: www.rtilab.com

Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Project:

Environmental Consulting & Technology, Inc.

Collection Date: 3/24/2007 8:00:00 AM

Federal Mogul #07-0197

Lab ID:

0703805-004

Client Sample ID Trip Sample

Matrix: WATER

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND VOLATILE ORGANIC COMPOUND		SW82	260B	Analyst: JW	
1,2,3-Trimethylbenzene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	3/28/2007 10:14:00 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
2-Methylnaphthalene	ND	5.0	μg/L	1	3/28/2007 10:14:00 PM
Benzene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
Ethylbenzene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
Isopropylbenzene	ND	1.0	μg/L	1	, 3/28/2007 10:14:00 PM
Methyl tert-butyl ether	ND	5.0	μg/L	1	3/28/2007 10:14:00 PM
Naphthalene	ND	5.0	μg/L	1	3/28/2007 10:14:00 PM
n-Propylbenzene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
Toluene	ND	1.0	μg/L	1	3/28/2007 10:14:00 PM
Xylenes, Total	ND	3.0	μg/L	1	3/28/2007 10:14:00 PM
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1	3/28/2007 10:14:00 PM
Surr: Dibromofluoromethane	108	70-130	%REC	1	3/28/2007 10:14:00 PM
Surr: Toluene-d8	107	70-130	%REC	1	3/28/2007 10:14:00 PM

- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response M
- Reporting Detection Limit



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422,8000 FAX: 734.422.5342

Website: www.rtilab.com

Analytical Report

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Project:

Collection Date: 3/25/2007 12:45:00 PM

Federal Mogul #07-0197

Lab ID:

0703805-005

Matrix: GROUNDWATER

Client Sample ID MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC H	YDROCARBONS			SW8	310	Analyst: M E
2-Methylnaphthalene	49	1.0		µg/L	1	3/29/2007 4:13:56 AM
Acenaphthene	19	1.0		μg/L	1	3/29/2007 4:13:56 AM
Acenaphthylene	ND	1.0		μg/L	1	3/29/2007 4:13:56 AM
Anthracene	1.9	1.0		μg/L	1	3/29/2007 4:13:56 AM
Benz(a)anthracene	0.34	1.0	J	μg/L	1	3/29/2007 4:13:56 AM
Benzo(a)pyrene	0.21	1.0	J	μ g /L	1	3/29/2007 4:13:56 AM
Benzo(b)fluoranthene	ND	1.0		μ g/ L	1	3/29/2007 4:13:56 AM
Benzo(g,h,i)perylene	DM	1.0		μg/L	1	3/29/2007 4:13:56 AM
Benzo(k)fluoranthene	ND	1.0		μg/L	1	3/29/2007 4:13:56 AM
Chrysene	0.19	1.0	J	μg/L	1	3/29/2007 4:13:56 AM
Dibenz(a,h)anthracene	ND	1.0		μg/L	1	3/29/2007 4:13:56 AM
Fluoranthene	4.4	1.0		μg/L	1	3/29/2007 4:13:56 AM
Fluorene	4.3	1.0		μg/L	1	3/29/2007 4:13:56 AM
Indeno(1,2,3-cd)pyrene	ND	1.0		μg/L	1	3/29/2007 4:13:56 AM
Naphthalene	120	1.0		μg/L	1	3/29/2007 4:13:56 AM
Phenanthrene	16	1.0		μg/L	1	3/29/2007 4:13:56 AM
Pyrene	2,1	1.0		μg/L	1	3/29/2007 4:13:56 AM
Surr: p-Terphenyl	116	70-130		%REC	1	3/29/2007 4:13:56 AM
METALS, ICP/MS				SW6020A		Analyst: AV
Lead	0.23	1.0	J	μg/L	5	3/28/2007 1:17:31 PM
VOLATILE ORGANIC COMPOU VOLATILE ORGANIC COMPOU	NDS - ULG LIST NDS			SW82	60B	Analyst: JW
1,2,3-Trimethylbenzene	25	1.0		μg/L	1	3/30/2007 9:00:00 PM
1,2,4-Trimethylbenzene	97	1.0		μg/L	1	3/30/2007 9:00:00 PM
1,3,5-Trimethylbenzene	33	1.0		μg/L	1	3/30/2007 9:00:00 PM
2-Methylnaphthalene	41	5.0		μg/L	1	3/30/2007 9:00:00 PM
Benzene	8.5	1.0		μg/L	1	3/30/2007 9:00:00 PM
Ethylbenzene	20	1.0		µg/L	1	3/30/2007 9:00:00 PM
Isopropylbenzene	3.6	1.0		μg/L	1	3/30/2007 9:00:00 PM
Methyl tert-butyl ether	ND	5.0		µg/L	1	3/30/2007 9:00:00 PM
Naphthalene	160	5.0		µg/L	1	3/30/2007 9:00:00 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level
- Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response M
- Reporting Detection Limit

Page 8 of 37



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422.8000 FAX: 734.422.5342

Website: www.rtilab.com

Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Project:

Federal Mogul #07-0197

Lab ID:

0703805-005

Matrix: GROUNDWATER

Collection Date: 3/25/2007 12:45:00 PM

Client Sample ID MW-1

Analyses	Result	~	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS VOLATILE ORGANIC COMPOUNDS			SW82	60B	Analyst: JW
n-Propylbenzene	8.9	1.0	μg/L	1	3/30/2007 9:00:00 PM
Toluene	74	1.0	μg/L	1	3/30/2007 9:00:00 PM
Xylenes, Total	160	3.0	μg/L	1	3/30/2007 9:00:00 PM
Surr: 4-Bromofluorobenzene	109	70-130	%REC	1	3/30/2007 9:00:00 PM
Surr: Dibromofluoromethane	104	70-130	%REC	1	3/30/2007 9:00:00 PM
Surr: Toluene-d8	106	70-130	%REC	1	3/30/2007 9:00:00 PM

- */X Value exceeds Maximum Contaminant Level
 - Value above quantitation range
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response Μ
- Reporting Detection Limit

Page 9 of 37



Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/25/2007 1:15:00 PM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-006

Matrix: GROUNDWATER

Client Sample ID Storm Sewer

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HY	DROCARBONS			SW8	310	Analyst: ME
2-Methylпарhthalene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Acenaphthene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Acenaphthylene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Anthracene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Benz(a)anthracene	0.14	1.0	J	μg/L	1	3/29/2007 4:46:42 AM
Benzo(a)pyrene	0.18	1.0	J	μg/L	1	3/29/2007 4:46:42 AM
Benzo(b)fluoranthene	0.14	1.0	J	µg/L	1	, 3/29/2007 4:46:42 AM
Benzo(g,h,i)perylene	ND	1.0		µg/L	1	3/29/2007 4:46:42 AM
Benzo(k)fluoranthene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Chrysene	0.19	1.0	ل	μg/L	1	3/29/2007 4:46:42 AM
Dibenz(a,h)anthracene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Fluoranthene	1.1	1.0		μg/L	1	3/29/2007 4:46:42 AM
Fluorene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Indeno(1,2,3-cd)pyrene	0.26	1.0	j	μg/L	1	3/29/2007 4:46:42 AM
Naphthalene	ND	1.0		μg/L	1	3/29/2007 4:46:42 AM
Phenanthrene	0.29	1.0	j	μg/L	1	3/29/2007 4:46:42 AM
Pyrene	0.69	1.0	J	μg/L	1	3/29/2007 4:46:42 AM
Surr: p-Terphenyl	99.0	70-130		%REC	1	3/29/2007 4:46:42 AM
METALS, ICP/MS				SW60)20A	Analyst: AV
Lead	ND	1.0		µg/L	5	3/28/2007 1:19:09 PM
VOLATILE ORGANIC COMPOUN VOLATILE ORGANIC COMPOUN			SW8260B			Analyst: J∖
1,2,3-Trimethylbenzene	ND	1.0	-	μg/L	1	3/30/2007 9:26:00 PM
1,2,4-Trimethylbenzene	ND	1.0		μg/L	1	3/30/2007 9:26:00 PM
1,3,5-Trimethylbenzene	ND	1.0		μg/L	1	3/30/2007 9:26:00 PM
2-Methylnaphthalene	ND	5.0		μg/L	1	3/30/2007 9:26:00 PM
Benzene	ND	1.0		μg/L	1	3/30/2007 9:26:00 PM
Ethylbenzene	ND	1.0		μg/L	1	3/30/2007 9:26:00 PM
Isopropylbenzene	ND	1.0		μg/L	1	3/30/2007 9:26:00 PM
Methyl tert-butyl ether	ND	5.0		μg/L	1	3/30/2007 9:26:00 PM
Naphthalene	1.1	5.0	J	μg/L	1	3/30/2007 9:26:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RLReporting Detection Limit

Page 10 of 37



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422.8000

FAX: 734.422.5342 Website: www.rtilab.com **Analytical Report**

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/25/2007 1:15:00 PM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-006

Client Sample ID Storm Sewer

Matrix: GROUNDWATER

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND VOLATILE ORGANIC COMPOUND			SW82	60B	Analyst: JW
n-Propylbenzene	ND	1.0	µg/L	1	3/30/2007 9:26:00 PM
Toluene	ND	1.0	μg/L	1	3/30/2007 9:26:00 PM
Xylenes, Total	ND	3.0	μg/L	1	3/30/2007 9:26:00 PM
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1	3/30/2007 9:26:00 PM
Surr: Dibromofluoromethane	106	70-130	%REC	1	3/30/2007 9:26:00 PM
Surr: Toluene-d8	107	70-130	%REC	1	3/30/2007 9:26:00 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

Value above quantitation range

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

M Manual Integration used to determine area response

Reporting Detection Limit

Page 11 of 37



Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Project:

Federal Mogul #07-0197

Lab ID:

0703805-007

Matrix: GROUNDWATER

Collection Date: 3/25/2007 2:15:00 PM

Client Sample ID MW-3

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HY	DROCARBONS		SW8	310	Analyst: M E
2-Methylnaphthalene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Acenaphthene	ND	1.0	µg/∟	1	3/29/2007 5:19:28 AM
Acenaphthylene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Anthracene	ND	1.0	µg/L	1	3/29/2007 5:19:28 AM
Benz(a)anthracene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Benzo(a)pyrene	ND	1.0	µg/L	1	3/29/2007 5:19:28 AM
Benzo(b)fluoranthene	ND	1.0	μg/L	1	, 3/29/2007 5:19:28 AM
Benzo(g,h,i)perylene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Benzo(k)fluoranthene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Chrysene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Dibenz(a,h)anthracene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Fluoranthene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Fluorene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Indeno(1,2,3-cd)pyrene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Naphthalene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Phenanthrene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Pyrene	ND	1.0	μg/L	1	3/29/2007 5:19:28 AM
Surr: p-Terphenyl	91.4	70-130	%REC	1	3/29/2007 5:19:28 AM
METALS, ICP/MS			SW60	20A	Analyst: AV
Lead	ND	1.0	μg/L	5	3/28/2007 1:20:47 PM
VOLATILE ORGANIC COMPOU VOLATILE ORGANIC COMPOU			SW82	60B	Analyst: JW
1,2,3-Trimethylbenzene	ND	1.0	µg/L	1	3/30/2007 9:51:00 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
2-Methylnaphthalene	ND	5.0	μg/L	1	3/30/2007 9:51:00 PM
Benzene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
Ethylbenzene	ND	1.0	µg/L	1	3/30/2007 9:51:00 PM
lsopropylbenzene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
Methyl tert-butyl ether	ND	5.0	μg/L	1	3/30/2007 9:51:00 PM
Naphthalene	ND	5.0	μg/L	1	3/30/2007 9:51:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response
- RLReporting Detection Limit

Page 12 of 37



Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/25/2007 2:15:00 PM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-007

Matrix: GROUNDWATER

Client Sample ID MW-3

Analyses	Result	~	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS VOLATILE ORGANIC COMPOUNDS			SW82	60B	Analyst: JW
n-Propylbenzene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
Toluene	ND	1.0	μg/L	1	3/30/2007 9:51:00 PM
Xylenes, Total	ND	3.0	μg/L	1	3/30/2007 9:51:00 PM
Surr: 4-Bromofluorobenzene	106	70-130	%REC	1	3/30/2007 9:51:00 PM
Surr: Dibromofluoromethane	112	70-130	%REC	1	3/30/2007 9:51:00 PM
Surr: Toluene-d8	107	70-130	%REC	1	3/30/2007 9:51:00 PM

- */X Value exceeds Maximum Contaminant Level
- Value above quantitation range Ε
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
 - Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response
- Reporting Detection Limit

Page 13 of 37



Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Project:

Collection Date: 3/25/2007 3:00:00 PM

Lab ID:

Federal Mogul #07-0197

0703805-008

Matrix: GROUNDWATER

Client Sample ID MW-4

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HY	'DROCARBONS		SW8	310	Analyst: MB
2-Methylnaphthalene	NÐ	1.0	µg/L	1	3/29/2007 5:52:13 AM
Acenaphthene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Acenaphthylene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Anthracene	DM	1.0	µg/L	1	3/29/2007 5:52:13 AM
Benz(a)anthracene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Benzo(a)pyrene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Benzo(b)fluoranthene	ND	1.0	µg/L	1	, 3/29/2007 5:52:13 AM
Benzo(g,h,i)perylene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Benzo(k)fluoranthene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Chrysene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Dibenz(a,h)anthracene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Fluoranthene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Fluorene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Indeno(1,2,3-cd)pyrene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Naphthalene	ND	1.0	μg/L	1	3/29/2007 5:52:13 AM
Phenanthrene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Pyrene	ND	1.0	µg/L	1	3/29/2007 5:52:13 AM
Surr: p-Terphenyl	97.6	70-130	%REC	1	3/29/2007 5:52:13 AM
METALS, ICP/MS			SW60	20A	Analyst: AV
Lead	6.0	1.0	μg/L	5	3/28/2007 1:22:25 PM
VOLATILE ORGANIC COMPOU VOLATILE ORGANIC COMPOU			SW82	:60B	Analyst: JW
1,2,3-Trimethylbenzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
2-Methylnaphthalene	ND	5.0	μg/L	1	3/30/2007 10:17:00 PM
Benzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
Ethylbenzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
Isopropylbenzene	ND	1.0	µg/∟	1	3/30/2007 10:17:00 PM
Methyl tert-butyl ether	ND	5.0	µg/L	1	3/30/2007 10:17:00 PM
Naphthalene	ND	5.0	μg/L	1	3/30/2007 10:17:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- Ţ Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- Manual Integration used to determine area response
- Reporting Detection Limit RL

Page 14 of 37



Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/25/2007 3:00:00 PM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-008

Client Sample ID MW-4

Matrix: GROUNDWATER

Analyses	Result	~	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS VOLATILE ORGANIC COMPOUNDS			SW82		Analyst: JW
n-Propylbenzene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
Toluene	ND	1.0	μg/L	1	3/30/2007 10:17:00 PM
Xylenes, Total	ND	3.0	μg/L	1	3/30/2007 10:17:00 PM
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1	3/30/2007 10:17:00 PM
Surr: Dibromofluoromethane	109	70-130	%REC	1	3/30/2007 10:17:00 PM
Surr: Toluene-d8	107	70-130	%REC	1	3/30/2007 10:17:00 PM

- Value exceeds Maximum Contaminant Level
- Е Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RLReporting Detection Limit

Page 15 of 37



31628 Glendale St. Livonia, Michigan 48150 TEL: 734.422.8000 FAX: 734.422.5342

Website: www.rtilab.com

Analytical Report

(consolidated)

WO#:

0703805

Date Reported:

4/4/2007

CLIENT:

Environmental Consulting & Technology, Inc.

Collection Date: 3/22/2007 11:37:00 AM

Project:

Federal Mogul #07-0197

Lab ID:

0703805-009

Matrix: WATER

Client Sample ID Trip Blank

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND VOLATILE ORGANIC COMPOUND			SW82	60B	Analyst: JW
1,2,3-Trimethylbenzene	ND	1.0	μg/Ł	1	3/28/2007 9:23:00 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
2-Methylnaphthalene	ND	5.0	μg/L	1	3/28/2007 9:23:00 PM
Benzene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
Ethylbenzene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
Isopropylbenzene	ND	1.0	μg/L	1	. 3/28/2007 9:23:00 PM
Methyl tert-butyl ether	ND	5.0	μg/L	1	3/28/2007 9:23:00 PM
Naphthalene	ND	5.0	μg/L	1	3/28/2007 9:23:00 PM
п-Propylbenzene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
Toluene	ND	1.0	μg/L	1	3/28/2007 9:23:00 PM
Xylenes, Total	ND	3.0	μg/L	1	3/28/2007 9:23:00 PM
Surr: 4-Bromofluorobenzene	108	70-130	%REC	1	3/28/2007 9:23:00 PM
Surr: Dibromofluoromethane	108	70-130	%REC	1	3/28/2007 9:23:00 PM
Surr: Toluene-d8	110	70-130	%REC	1	3/28/2007 9:23:00 PM

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- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- Reporting Detection Limit RL

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RTI Laboratories, Inc.

CLIENT:

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

Date: 4/4/2007

QC SUMMARY REPORT

TestCode: SW_6020A

Sample ID: LCS-6456	SampType: LCS	TestCode: SW_6020A Units: μg/L	Prep Date: 3/28/2007	RunNo: 12515
Client ID: LCSW	Batch ID: 6456	TestNo: SW6020A	Analysis Date: 3/28/2007	SeqNo: 189620
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	910	2.0 1,000 0	91.1 85 115	
Sample ID: MB-6456	SampType: MBLK	TestCode: SW_6020A Units: μg/L	Prep Date: 3/28/2007	RunNo: 12515
Client ID: PBW	Batch ID: 6456	TestNo: SW6020A	Analysis Date: 3/28/2007	SeqNo: 189621
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	0.038	0.20		J
Sample ID: 0703805-003B-MS	SampType: MS	TestCode: SW_6020A Units: µg/L	Prep Date: 3/28/2007	RunNo: 12515
Sample ID: 0703805-003B-MS Client ID: MW-2	SampType: MS Batch ID: 6456	TestCode: SW_6020A Units: µg/L TestNo: SW6020A	Prep Date: 3/28/2007 Analysis Date: 3/28/2007	RunNo: 12515 SeqNo: 189622
	, ,,	_	•	
Client ID: MW-2	Batch ID: 6456	TestNo: SW6020A	Analysis Date: 3/28/2007	SeqNo: 189622
Client ID: MW-2 Analyte	Batch ID: 6456 Result	TestNo: SW6020A PQL SPK value SPK Ref Val	Analysis Date: 3/28/2007 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 189622
Client ID: MW-2 Analyte Lead	Batch ID: 6456 Result	TestNo: SW6020A PQL SPK value SPK Ref Val 2.0 1,000 12.62	Analysis Date: 3/28/2007 %REC LowLimit HighLimit RPD Ref Val 91.2 75 125	SeqNo: 189622 %RPD RPDLimit Qual
Client ID: MW-2 Analyte Lead Sample ID: 0703805-003B-MSD	Batch ID: 6456 Result 920 SampType: MSD	TestNo: SW6020A PQL SPK value SPK Ref Val 2.0 1,000 12.62 TestCode: SW_6020A Units: µg/L	Analysis Date: 3/28/2007 %REC LowLimit HighLimit RPD Ref Val 91.2 75 125 Prep Date: 3/28/2007	SeqNo: 189622 %RPD RPDLimit Qual RunNo: 12515

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

J Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_6020S

Sample ID:	0703805-001B-MS	SampType:	MS	TestCode	e: SW_60205	Units: μg/Kg-	dry	Prep Da	te: 3/29/20	007	RunNo: 12	568	
Client ID:	SB-1, MW-1 @ 18-19	Batch ID:	6487	TestNo	: SW6020A			Analysis Da	te: 3/29/20	007	SeqNo: 19	0607	
Anaiyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium			43,000	170	41,350	261.9	103	75	125				· · · · · · · · · · · · · · · · · · ·
Chromium			45,000	830	41,350	5,550	94.4	75	125				
Lead			45,000	830	41,350	3,888	99.1	75	125				
Sample ID:	0703805-001B-MSD	SampType:	MSD	TestCode	s: SW_6020S	Units: μg/Kg-	dry	Prep Dal	te: 3/29/20	107	RunNo: 12	568	
Client ID:	SB-1, MW-1 @ 18-19	Batch ID:	6487	TestNo	: SW6020A			Analysis Dat	te: 3/29/20	107	SeqNo: 19 0	0608	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium			43,000	170	41,350	261.9	104	75	125	42,860	1 14	25	
Chromium			45,000	830	41,350	5,550	95.9	75	125	44,580	1.37	25	
Lead			45,000	830	41,350	3,888	99.2	75	125	44,860	0.0857	25	
Sample ID:	LCS-6487	SampType:	LCS	TestCode	: SW_6020S	Units: µg/Kg		Prep Dat	te: 3/29/20	07	RunNo: 125	68	
Client ID:	LCSS	Batch ID:	6487	TestNo	SW6020A			Analysis Dat	e: 3/29/20	07	SeqNo: 190	0615	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			920	1,000	1,000	0	91.7	80	120				J
Sample ID:	MB-6487	SampType:	MBLK	TestCode	: SW_6020S	Units: µg/Kg		Prep Dat	e: 3/29/20	07	: RunNo: 12 6	68	
Client ID:	PBS	Batch ID:	6487	TestNo	: SW6020A			Analysis Dat	e: 3/29/20	07	SeqNo: 190	1620	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	100									

Qualifiers:

E Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Manual Integration used to determine area response

Reporting Detection Limit

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260A

R RPD outside accepted recovery limits

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Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCo	de: SW_82 60 <i>A</i>	L Units: μg/L		Prep Dat	e:		RunNo: 12	552	
Client ID: LCSW	Batch ID: R12552	Test	lo: SW8260B			Analysis Dat	e: 3/28/20	07	SeqNo: 19 6	0068	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,2,3-Trimethylbenzene	9.9	1.0	10.00	0	99.1	70	130		·································		
1,2,4-Trimethylbenzene	13	1.0	10.00	0	126	70	130				
1,3,5-Trimethylbenzene	10	1.0	10.00	0	105	70	130				
2-Methylnaphthalene	9.6	5.0	10.00	0	96.0	70	130				
Benzene	11	1.0	10.00	0	106	70	130				
Ethylbenzene	11	1.0	10.00	0	108	70	130				
Isopropylbenzene	11	1.0	10.00	0	111	70	130				
Methyl tert-butyl ether	21	5.0	20.00	0	104	70	130				
Naphthalene	11	5.0	10.00	0	106	70	130				
n-Propylbenzene	11	1.0	10.00	0	109	70	130				
Toluene	13	1.0	10.00	0	126	70	130				
Xylenes, Total	40	3.0	30.00	0	132	70	130				s
Surr: 4-Bromofluorobenzene	54		50.00		109	70	130				
Surr: Dibromofluoromethane	54		50.00		108	70	130				
Surr: Toluene-d8	55		50.00		110	70	130				
Sample ID: MBLK QEC B-6-25	SampType: MBLK	TestCoo	ie: SW_8260A	Units: μg/L		Prep Date	3:		RunNo: 12 8	552	
Client ID: PBW	Batch ID: R12552	TestN	lo: SW8260 B			Analysis Date	e: 3/28/20	07	SeqNo: 190	1069	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
I,2,3-Trimethylbenzene	ND	1.0	•		-						
1,2,4-Trimethylbenzene	ND	1,0									
1,3,5-Trimethylbenzene	ND	1.0									
2-Methylnaphthalene	ND	5.0									
Benzene	ND	1.0			•						
Ethylbenzene	ND	1.0									
sopropylbenzene	ND	1.0									
Methyl tert-butyl ether	ND	5.0									
Naphthalene	ND	5.0									
n-Propylbenzene	ND	1.0									
Toluene	ND	1.0									

ND Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

RL Reporting Detection Limit

QC SUMMARY REPORT

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TestCode: SW_8260A

Sample ID: MBLK QEC B-6-25	SampType: MBLK	TestCod	le: SW_8260A	Units: µg/L		Prep Dat	e: "		RunNo: 125	552	
Client ID: PBW	Batch ID: R12552	TestN	lo: SW8260B			Analysis Dat	e: 3/28/20	07	SeqNo: 190	069	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	ND	3.0				,					
Surr: 4-Bromofluorobenzene	55		50.00		110	70	130				
Surr: Dibromofluoromethane	53		50.00		106	70	130				
Surr: Toluene-d8	- 54		50.00		108	70	130				
Sample ID: 0703666-001AMS	SampType: MS	TestCod	le: SW_8260A	Units: μg/L		Prep Dat	e:		RunNo: 125	552	
Client ID: ZZZZZZ	Batch ID: R12552	TestN	lo: SW8260B			Analysis Dat	e: 3/28/20	07	SeqNo: 190	074	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	1,900	200	2,000	0	97.4	70	130				
1,2,4-Trimethylbenzene	2,500	200	2,000	0	125	70	130				
1,3,5-Trimethylbenzene	2,100	200	2,000	0	107	70	130				
2-Methylnaphthalene	1,700	1,000	2,000	0	86.3	70	130				
Benzene	2,000	200	2,000	0	99.6	70	130				
Ethylbenzene	2,100	200	2,000	0	104	70	130				
isopropylbenzene	2,200	200	2,000	0	109	70	130				
Methyl tert-butyl ether	4,000	1,000	4,000	0	100	70	130				
Naphthalene	1,900	1,000	2,000	0	97.3	70	130				
n-Propylbenzene	2,100	200	2,000	0	105	70	130				
Toluene	2,500	200	2,000	0	127	70	130				
Xylenes, Total	7,600	600	6,000	0	128	70	130				
Surr: 4-Bromofluorobenzene	11,000		10,000		109	70	130				
Surr: Dibromofluoromethane	11,000		10,000		106	70	130				
Surr: Toluene-d8	11,000		10,000		108	70	130				
Sample ID: 0703666-001AMSD	SampType: MS D	TestCoo	ie: SW_8260A	. Units: μg/L		Prep Dat	e:		RunNo: 125	552	·
Client ID: ZZZZZZ	Batch ID: R12552	TestN	io: SW8260B			Analysis Dat	e: 3/28/20	07	SeqNo: 19 0	0075	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	1,900	200	2,000	0	96.7	70	130	1,948	0.721	25	
1,2,4-Trimethylbenzene	2,500	200	2,000	0	126	70	130	2,496	1.19	25	
•	uantitation range ation used to determine area res	sponse		g times for preparation	-	exceeded		Analyte detected be	-		

S Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260A

Sample ID: 0703666-001AMSD	SampType: MSD	TestCo	de: SW_8260 A	. Units: μg/L		Prep Dat	e:		RunNo: 125	552	
Client ID: ZZZZZZ	Batch ID: R12552	Test	lo: SW8260 B			Analysis Dat	e: 3/28/20	07	SeqNo: 190	0075	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	2,100	200	2,000	0	105	70	130	2,132	1.42	25	
2-Methylnaphthalene	1,800	1,000	2,000	0	89.4	70	130	1,726	3.53	25	
Benzene	2,000	200	2,000	0	100	70	130	1,992	0.700	25	
Ethylbenzene	2,100	200	2,000	0	105	70	130	2,082	0.766	25	
Isopropylbenzene	2,200	200	2,000	0	111	70	130	2,178	1.64	25	
Methyl tert-butyl ether	3,900	1,000	4,000	0	96.9	70	130	4,014	3.50	25	
Naphthalene	2,100	1,000	2,000	0	107	70	130	1,946	9.31	25	
n-Propylbenzene	2,100	200	2,000	0	104	70	130	2,106	1.53	25	
Toluene	2,500	200	2,000	0	123	70	130	2,530	2.56	25	
Xylenes, Total	7,700	600	6,000	0	128	70	130	7,650	0.496	25	
Surr: 4-Bromofluorobenzene	11,000		10,000		109	70	130		0	25	
Surr: Dibromofluoromethane	11,000		10,000		106	70	130		0	25	
Surr: Toluene-d8	11,000		10,000		109	70	130		0	25	
Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCod	de: SW_8260A	. Units: μg/L		Prep Dat	e:		RunNo: 126	330	
Client ID: LCSW	Batch ID: R12630	TestN	lo: SW8260B			Analysis Dat	e: 3/30/20	07	SeqNo: 191	1350	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	9,6	1.0	10.00	0	96.2	70	130	•			
1,2,4-Trimethylbenzene	12	1.0	10.00	0	119	70	130				
1,3,5-Trimethylbenzene	11	1.0	10.00	0	105	70	130				
2-Methylnaphthalene	9.0	5.0	10.00	0	90.0	70	130				
Benzene	9.9	1.0	10.00	0	98.6	70	130				
Ethylbenzene	10	1,0	10.00	0	104	70	130				
Isopropylbenzene	11	1.0	10.00	0	114	70	130				
Methyl tert-butyl ether	19	5.0	20.00	0	93.8	70	130				
Naphthalene	10	5.0	10.00	0	104	70	130				
n-Propylbenzene	10	1.0	10.00	0	104	70	130				
Toluene	12	1.0	10.00	0	122	70	130				
Xylenes, Total	37	3.0	30.00	0	124	70	130				
Aylenes, Total											

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260A

Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCode: SW_8260A Un	ts: µg/L Prep	Date:	RunNo: 12630	
Client ID: LCSW	Batch ID: R12630	TestNo: SW8260B	Analysis I	Date: 3/30/2007	SeqNo: 191350	
Analyte	Result	PQL SPK value SPK Re	ef Val %REC LowLim	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Surr: Dibromofluoromethane	52	50.00	103 7) 130		·
Surr: Toluene-d8	54	50.00	108 7	3 130		
Sample ID: MBLK QEC B-6-25	SampType: MBLK	TestCode: SW_8260A Uni	ts: µg/L Prep I	Date:	RunNo: 12630	
Client ID: PBW	Batch ID: R12630	TestNo: SW8260B	Analysis I	Date: 3/30/2007	SeqNo: 191351	
Analyte	Result	PQL SPK value SPK Re	ef Val %REC LowLim	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
1,2,3-Trimethylbenzene	ND	1.0			:	
1,2,4-Trimethylbenzene	ND	1.0				
1,3,5-Trimethylbenzene	ND	1.0				
2-Methylnaphthalene	ND	5.0				
Benzene	ND	1.0				
Ethylbenzene	ND	1.0				
Isopropylbenzene	ND	1.0				
Methyl tert-butyl ether	ND	5.0	•			
Naphthalene	ND	5.0				
n-Propylbenzene	ND	1.0				
Toluene	ND	1.0				
Xylenes, Total	ND	3.0				
Surr: 4-Bromofluorobenzene	53	50.00	106 7	130		
Surr: Dibromofluoromethane	55	50.00	110 7	0 130		
Surr: Toluene-d8	53	50.00	106 7	D 130		
Sample ID: 0703824-003AMS	SampType: MS	TestCode: SW_8260A Un	ts: µg/L Prep l	Date:	RunNo: 12630	
Client ID: ZZZZZZ	Batch ID: R12630	TestNo: SW8260B	· Analysis	Date: 3/30/2007	SeqNo: 191366	
Analyte	Result	PQL SPK value SPK Re	ef Val %REC LowLim	it HighLimit RPD Ref Val	%RPD RPDLimit	Qual
1,2,3-Trimethylbenzene	460	50 500.0	0 91.1 7	0 130		
1,2,4-Trimethylbenzene	580	50 500.0	0 117 7	0 130		
1,3,5-Trimethylbenzene	510	50 500.0	0 103 7	0 130		
2-Methylnaphthalene	440	250 500.0	0 88.5 7	0 130		
Qualifiers: E Value above of	quantitation range	H Holding times fo	r preparation or analysis exceeded	J Analyte detected b	elow quantitation lin	
•	ration used to determine area res	ponse ND Not Detected at	he Reporting Limit	R RPD outside accep	oted recovery limits	
RL Reporting De			outside accepted recovery limits		Page	22 of

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260A

Sample ID: 0703824-003AMS	SampType: MS	TestCo	de: SW_8260A	. Units: μg/L		Prep Da	te:		RunNo: 126	630	
Client ID: ZZZZZZ	Batch ID: R12630	Test	lo: SW8260B			Analysis Da	te: 3/30/20	107	SeqNa: 191	1366	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	500	50	500.0	0	100	70	130				
Ethylbenzene	500	50	500.0	0	100	70	130				
Isopropylbenzene	530	50	500.0	0	107	70	130				
Methyl tert-butyl ether	1,100	250	1,000	0	106	70	130				
Naphthalene	510	250	500.0	0	102	. 70	130		:		
n-Propylbenzene	500	50	500.0	0	99.3	70	130				
Toluene	580	50	500.0	0	116	70	130				
Xylenes, Total	1,800	150	1,500	0	120	70	130				
Surr: 4-Bromofluorobenzene	2,700		2,500		110	70	130				
Surr: Dibromofluoromethane	2,700		2,500		108	70	130				
Surr: Toluene-d8	2,700		2,500		109	70	130				
Sample ID: 0703824-003AMSD	SampType: MSD	TestCo	de: SW_8260A	Units: μg/L		Prep Da	ie:		RunNo: 126	330	
Client ID: ZZZZZZ	Batch ID: R12630	TestN	lo: SW8260B			Analysis Da	ie: 3/30/20	107	SeqNo: 191	1367	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,2,3-Trimethylbenzene	480	50	500.0	0	96.8	70	130	455.5	6.07	25	
1,2,4-Trimethylbenzene	600	50	500.0	0	121	70	130	584.5	3.20	25	
1,3,5-Trimethylbenzene	530	50	500.0	0	106	70	130	512.5	3.64	25	
2-Methylnaphthalene	420	250	500.0	0	84.5	70	130	442.5	4.62	25	
3enzene	480	50	500.0	0	95.7	70	130	502.0	4.79	25	
Ethylbenzene	520	50	500.0	0	103	70	130	501.5	3.04	25	
sopropylbenzene	550	50	500.0	0	110	70	130	533.5	2.95	25	
Methyl tert-butyl ether	980	250	1,000	0	98.4	70	130	1,060	7.53	25	
Naphthalene	480	250	500.0	0	96.6	70	130	511.0	5.63	25	
n-Propylbenzene	510	50	500.0	0	101	70	130	496.5	1.99	25	
	3,0				120	70	130	580.5	3.14	25	
• •	600	50	500.0	0	120						
Toluene			500.0 1,500	0	122	70	130	1,798	1.68	25	
Toluene	600 1,800	50		_		70 70	130 130	1,798	1.68 0	25 25	
Toluene Xylenes, Total	600	50	1,500	_	122			1,798			

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

R RPD outside accepted recovery limits

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Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCo	de: SW_8260S	Units: µg/Kg		Prep Da	te:		RunNo: 126	355	
Client ID: LCSS	Batch ID: R12655	Testi	lo: SW8260B			Analysis Da	te: 4/2/200	7	SeqNo: 191	1583	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	530	50	500.0	0	106	70	130				
1,2,4-Trimethylbenzene	580	50	500.0	0	115	70	130		:		
1,3,5-Trimethylbenzene	580	50	500.0	0	115	70	130				
2-Methylnaphthalene	680	250	500.0	0	137	70	130				S
Benzene	560	30	500.0	0	111	70	130				
Ethylbenzene	560	50	500.0	0	112	70	130				
Isopropylbenzene	580	50	500.0	0	116	70	130				
Methyl tert-butyl ether	1,100	250	1,000	0	108	70	130				
Naphthalene	580	250	500.0	0	116	70	130				
n-Propylbenzene	570	50	500.0	0	114	70	130				
Toluene	560	50	500.0	0	111	70	130				
Xylenes, Total	1,700	150	1,500	0	111	70	130				
Surr: 4-Bromofluorobenzene	2,400		2,500		95.8	70	130				
Surr. Dibromofluoromethane	2,300		2,500		93.4	70	130				
Surr: Toluene-d8	2,400		2,500		97.0	70	130				
Sample ID: MBLK 1.0mL JW03	SampType: MBLK	TestCo	de: SW_8260S	Units: µg/Kg		Prep Da	te:		RunNo: 126	355	····
Client ID: PBS	Batch ID: R12655	Test∧	lo: SW8260B			Analysis Da	te: 4/2/200	7	SeqNo: 191	1584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	, ND	50									
1,2,4-Trimethylbenzene	ND	50									
1,3,5-Trimethylbenzene	ND	50									
2-Methylnaphthalene	ND	250									
Benzene	ND	30			•						
Ethylbenzene	ND	50									
isopropylbenzene	ND	50									
100propyrushizerre		250									
Methyl tert-butyl ether	ND										
	ND ND	250									
Methyl tert-butyl ether											

M Manual Integration used to determine area response

RL Reporting Detection Limit

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

RL Reporting Detection Limit

QC SUMMARY REPORT

TestCode: SW_8260S

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Sample ID: MBLK 1.0mL JW03	SampType: MBLK	TestCod	le: SW_8260S	Units: μg/Kg		Prep Da	te:		RunNo: 126	555	
Client fD: PBS	Batch ID: R12655	TestN	o: SW8260 B			Analysis Da	te: 4/2/200	7	SeqNo: 191	1584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	ND	150									
Surr: 4-Bromofluorobenzene	2,300		2,500		93.8	70	130				
Surr: Dibromofluoromethane	2,400		2,500		96.5	70	130				
Surr: Toluene-d8	2,400		2,500		96.9	70	130				
Sample ID: 0703820-008AMS	SampType: MS	TestCod	e: SW_8260S	Units: µg/Kg	-dry .	Prep Da	te:		RunNo: 126	555	
Client ID: ZZZZZZ	Batch ID: R12655	TestN	o: SW8260 B			Analysis Da	te: 4/3/200	7	SeqNo: 191	1595	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	700	64	639.3	52.42	102	70	130				
1,2,4-Trimethylbenzene	810	64	639.3	135.5	106	70	130				
1,3,5-Trimethylbenzene	700	64	639.3	22.37	106	70	130				
2-Methylnaphthalene	900	320	639.3	205.8	109	70	130				
Benzene	660	38	639.3	0	103	70	130				
Ethylbenzene	760	64	639.3	79.91	106	70	130				
Isopropylbenzene	760	64	639.3	72.88	108	70	130				
Methyl tert-butyl ether	1,000	320	1,279	0	80.4	70	130				
Naphthalene	990	320	639.3	257.0	115	70	130				
n-Propylbenzene	710	64	639.3	65.84	101	70	130				
Toluene	820	64	639.3	157.3	103	70	130				
Xylenes, Total	2,500	190	1,918	508.8	105	70	130				
Surr: 4-Bromofluorabenzene	3,000		3,196		92.8	70	130				
Surr: Dibromofluoromethane	2,700		3,196		85.0	70	130				
Surr: Toluene-d8	3,000		3,196		95.2	70	130				
Sample ID: 0703820-008AMSD	SampType: MSD	TestCod	e: SW_8260S	Units: µg/Kg	-dry	Prep Da	te:		RunNo: 12 6	555	
Client ID: ZZZZZZ	Batch ID: R12655	TestN	o: SW8260B			Analysis Da	te: 4/3/200	7	SeqNo: 191	1596	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	640	54	639.3	52.42	91.2	70	130	703.2	10.1	25	***************************************
1,2,4-Trimethylbenzene	750	64	639.3	135.5	96.5	70	130	814.4	7.92	25	
•	nantitation range ation used to determine area resp	onse		g times for preparation tected at the Reportin		exceeded		Analyte detected be UPD outside accep	-	its	re 25 of 3

Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

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QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 0703820-008AMSD	SampType: MSD	TestCo	de: SW_826 09	6 Units: μg/Kg-	try	Prep Date	e :		RunNo: 126	355	
Client ID: ZZZZZZ	Batch ID: R12655	TestN	No: SW8260B			Analysis Date	e: 4/3/200	7	SeqNo: 191	1596	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	640	64	639.3	22.37	96.1	70	130	696.8	9.01	25	
2-Methylnaphthaiene	800	320	639.3	205.8	92.9	70	130	904.5	12.3	25	
Benzene	610	38	639.3	0	95.9	70	130	659.7	7.33	25	
Ethylbenzene	700	64	639.3	79.91	96.4	70	130	758.8	8.61	25	
Isopropylbenzene	690	64	639.3	72.88	96.6	70	130	762.0	9.86	25	
Methyl tert-butyl ether	1,200	320	1,279	0	97.0	70	130	1,028	18.7	25	
Naphthatene	890	320	639.3	257.0	98.5	70	130	994.0	11.4	25	
n-Propylbenzene	660	64	639.3	65.84	93.3	70	130	712.8	7.35	25	
Toluene	760	64	639.3	157.3	93.6	70	130	815.1	7.57	25	
Xylenes, Total	2,300	190	1,918	508.8	92.6	70	130	2,517	9.66	25	
Surr: 4-Bromofluorobenzene	3,000		3,196		92.4	70	130		0	25	
Surr: Dibromofluoromethane	2,900		3,196		92.0	70	130		0	25	
Surr: Toluene-d8	3,000		3,196		95.1	70	130		0	25	
Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCod	de: SW_82605	Units: μg/Kg		Prep Date	e:		RunNo: 126	87	
Client ID: LCSS	Batch ID: R12687	TestN	lo: SW8260B			Analysis Date	e: 4/3/200	7	SeqNo: 192	2007	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	510	50	500.0	0	103	70	130				
1,2,4-Trimethylbenzene	530	50	500.0	0	107	70	130				
1,3,5-Trimethylbenzene	550	50	500.0	0	109	70	130				
2-Methylnaphthalene	580	250	500.0	0	116	70	130				
Benzene	510	30	500.0	0	102	70	130				
Ethylbenzene	540	50	500.0	0	108	70	130				
Isopropylbenzene	550	50	500.0	0	109	70	130				
Methyl tert-butyl ether	980	250	1,000	. 0	98.5	70	130				
Naphthalene	540	250	500.0	0	107	70	130				
n-Propylbenzene	540	50	500.0	0	107	70	130				
Toluene	530	50	500.0	0	106	70	130				
Xylenes, Total	1,600	150	1,500	0	106	70	130				
Aylenes, rotal											

Qualifiers:

Value above quantitation range

Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

J Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCode: SV	V_8260S	Units: µg/Kg		Prep Da	ate:		RunNo: 126	887	
Client ID: LCSS	Batch ID: R12687	TestNo: SV	V8260B			Analysis Da	ate: 4/3/200	7	SeqNo: 192	2007	
Analyte	Result	PQL SPI	K value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	2,300	· · · · · · · · · · · · · · · · · · ·	2,500		91.5	70	130				
Surr: Toluene-d8	2,400		2,500		96.5	70	130				
Sample ID: MBLK 1.0mL JW03	SampType: MBLK	TestCode: SV	V_8260S	Units: µg/Kg		Prep Da	ite:		RunNo: 126	687	
Client ID: PBS	Batch ID: R12687	TestNo: SV	V8260B			Analysis Da	ite: 4/3/200	7	SeqNo: 192	8008	
Analyte	Result	PQL SPI	K value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	ND	50									
1,2,4-Trimethylbenzene	ND	50									
1,3,5-Trimethylbenzene	ND	50									
2-Methylnaphthalene	ND	250							:		
Benzene	ND	30									
Ethylbenzene	DN	50									
Isopropylbenzene	ND	50									
Methyl tert-butyl ether	ND	250									
Naphthalene	ND	250									
n-Propylbenzene	ND	50									
Toluene	ND	50									
Xylenes, Total	ND	150									
Surr: 4-Bromofluorobenzene	2,400		2,500		94.1	70	130				
Surr: Dibromofluoromethane	2,300		2,500		91.6	70	130				
Surr: Toluene-d8	2,400		2,500		96.0	70	130				
Sample ID: 0703837-003AMS	SampType: MS	TestCode: SV	V_8260S	Units: µg/Kg-c	iry	Prep Da	ite:		RunNo: 126	87	
Client 1D: ZZZZZZ	Batch ID: R12687	TestNo: SV	V8260B		•	Analysis Da	ite: 4/3/200	7	SeqNa: 192	012	
Analyte	Result	PQL SPF	< value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	810	61	605.9	200.5	101	70	130				
1,2,4-Trimethylbenzene	1,100	61	605.9	447.7	112	70	130				
1,3,5-Trimethylbenzene	760	61	605,9	83.61	112	70	130				
2-Methylnaphthalene	820	300	605.9	214.5	66.6	70	130				S
Qualifiers: E Value above q	uantitation range	Н	Holding	times for preparation	or analysis	exceeded	J A	Analyte detected be	elow quantitation	lin	
M Manual Integr	ation used to determine area res	ponse ND	Not Det	tected at the Reporting	Limit		R I	CPD outside accep	ted recovery limi	ts	- 07
RL Reporting Dete	ection Limit	S	Spike R	ecovery outside accept	ted recover	y limits				Pag	e 27 c

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QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 0703837-003AMS	SampType: MS	TestCod	de: SW_8260S	Մnits: μg/I	(g-dry	Prep Da	te:		RunNo: 126	387	
Client ID: ZZZZZZ	Batch ID: R12687	TestN	lo: SW8260B			Analysis Da	te: 4/3/200	7	SeqNo: 192	2012	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	870	36	605.9	256.9	101	70	130				
Ethylbenzene	1,200	61	605.9	500.5	111	70	130				
Isopropylbenzene	800	61	605.9	109.1	113	70	130				
Methyl tert-butyl ether	1,300	300	1,212	0	104	70	130				
Naphthalene	850	300	605.9	263.6	96.7	70	130				
n-Propylbenzene	960	61	605.9	282,9	113	70	130				
Toluene	820	61	605.9	184.2	104	70	130				
Xylenes, Total	3,200	180	1,818	1,298	106	70	130		:		
Surr: 4-Bromofluorobenzene	2,900		3,029		94.5	70	130				
Surr: Dibromofluoromethane	2,700		3,029		88.5	70	130				
Surr: Toluene-d8	2,900		3,029		96.8	70	130				
Sample ID: 0703837-003AMSD	SampType: MSD	TestCoo	de: SW_8260S	Units: µg/F	(g-dry	Prep Dat	e:		RunNo: 126	887	
Client ID: ZZZZZZ	Batch ID: R12687	TestN	lo: SW8260B			Analysis Dat	e: 4/3/200	7	SeqNo: 192	2013	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,2,3-Trimethylbenzene	810	61	605.9	200.5	101	70	130	813.1	0.149	25	
1,2,4-Trimethylbenzene	1,100	24	005.0				400	1,125	4.07	25	
	1, 100	61	605.9	447.7	104	70	130	1,120	1.01		
1,3,5-Trimethylbenzene	750	61	605.9	447.7 83.61	104 109	70 70	130	759.8	1.85	25	
•	· ·									25 25	
2-Methylnaphthalene	750	61	605.9	83.61	109	70	130	759.8	1.85		
2-Methylnaphthalene Benzene	750 680	61 300	605,9 605,9	83.61 214.5	109 76.2	70 70	130 130	759.8 618.0	1.85 8.99	25	
1,3,5-Trimethylbenzene 2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene	750 680 870	61 300 36	605,9 605,9 605,9	83.61 214.5 256.9	109 76.2 101	70 70 70	130 130 130	759.8 618.0 869.4	1.85 8.99 0.419	25 25	
2-Methylnaphthalene Benzene Ethylbenzene	750 680 870 1,100	61 300 36 61	605.9 605.9 605.9 605.9	83.61 214.5 256.9 500.5	109 76.2 101 106	70 70 70 70	130 130 130 130	759.8 618.0 869.4 1,174	1.85 8.99 0.419 2.77	25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene	750 680 870 1,100 780	61 300 36 61 61	605.9 605.9 605.9 605.9	83.61 214.5 256.9 500.5 109.1	109 76.2 101 106 111	70 70 70 70 70	130 130 130 130 130	759.8 618.0 869.4 1,174 795.5	1.85 8.99 0.419 2.77 1.69	25 25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene Methyl tert-butyl ether Naphthalene	750 680 870 1,100 780 1,200	61 300 36 61 61 300	605.9 605.9 605.9 605.9 605.9 1,212	83.61 214.5 256.9 500.5 109.1	109 76.2 101 106 111 96.9	70 70 70 70 70 70	130 130 130 130 130 130	759.8 618.0 869.4 1,174 795.5 1,258	1.85 8.99 0.419 2.77 1.69 6.93	25 25 25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene sopropylbenzene Methyl tert-butyl ether Naphthalene n-Propylbenzene	750 680 870 1,100 780 1,200	61 300 36 61 61 300 300	605.9 605.9 605.9 605.9 605.9 1,212 605.9	83.61 214.5 256.9 500.5 109.1 0 263.6	109 76.2 101 106 111 96.9 97.6	70 70 70 70 70 70 70	130 130 130 130 130 130	759.8 618.0 869.4 1,174 795.5 1,258 849.4	1.85 8.99 0.419 2.77 1.69 6.93 0.640	25 25 25 25 25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene Methyl tert-butyl ether Naphthalene n-Propylbenzene Toluene	750 680 870 1,100 780 1,200 850 960	61 300 36 61 61 300 300	605.9 605.9 605.9 605.9 605.9 1,212 605.9 605.9	83.61 214.5 256.9 500.5 109.1 0 263.6 282.9	109 76.2 101 106 111 96.9 97.6 112	70 70 70 70 70 70 70	130 130 130 130 130 130 130	759.8 618.0 869.4 1,174 795.5 1,258 849.4 964.6	1.85 8.99 0.419 2.77 1.69 6.93 0.640 0.504	25 25 25 25 25 25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene Methyl tert-butyl ether Naphthalene n-Propylbenzene Toluene	750 680 870 1,100 780 1,200 850 960 800	61 300 36 61 61 300 300 61 61	605.9 605.9 605.9 605.9 605.9 1,212 605.9 605.9	83.61 214.5 256.9 500.5 109.1 0 263.6 282.9 184.2	109 76.2 101 106 111 96.9 97.6 112	70 70 70 70 70 70 70 70	130 130 130 130 130 130 130 130	759.8 618.0 869.4 1,174 795.5 1,258 849.4 964.6 816.1	1.85 8.99 0.419 2.77 1.69 6.93 0.640 0.504 2.18	25 25 25 25 25 25 25 25 25	
2-Methylnaphthalene Benzene Ethylbenzene Isopropylbenzene Methyl tert-butyl ether Naphthalene n-Propylbenzene Toluene Xylenes, Total	750 680 870 1,100 780 1,200 850 960 800 3,200	61 300 36 61 61 300 300 61 61	605.9 605.9 605.9 605.9 1,212 605.9 605.9 605.9	83.61 214.5 256.9 500.5 109.1 0 263.6 282.9 184.2	109 76.2 101 106 111 96.9 97.6 112 101	70 70 70 70 70 70 70 70 70	130 130 130 130 130 130 130 130 130	759.8 618.0 869.4 1,174 795.5 1,258 849.4 964.6 816.1	1.85 8.99 0.419 2.77 1.69 6.93 0.640 0.504 2.18 0.564	25 25 25 25 25 25 25 25 25 25	

Qualifiers:

E Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

R RPD outside accepted recovery limits

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Work Order:

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QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 10ug/L LCS 10uL	SampType: LCS	TestCo	de: SW_8260S	Units: µg/Kg		Prep Da	te:		RunNo: 126	887	
Client iD: LCSS	Batch ID: R12687	TestN	lo: SW8260B			Analysis Da	te: 4/4/200	7	SeqNo: 192	2045	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,2,3-Trimethylbenzene	510	50	500.0	0	103	70	130				
1,2,4-Trimethylbenzene	540	50	500.0	0	108	70	130				
1,3,5-Trimethylbenzene	550	50	500.0	0	110	70	130				
2-Methylnaphthalene	670	250	500.0	0	134	70	130				s
Benzene	510	30	500.0	0	102	70	130				
Ethylbenzene	540	50	500.0	0	109	70	130				
Isopropylbenzene	550	50	500.0	0	111	70	130				
Methyl tert-butyl ether	830	250	1,000	0	83.0	70	130				
Naphthalene	520	250	500.0	0	104	70	130				
n-Propylbenzene	540	50	500.0	0	108	70	130				
Toluene	530	50	500.0	0	106	70	130				
Xylenes, Total	1,600	150	1,500	0	106	70	130				
Surr: 4-Bromofluorobenzene	2,300		2,500		91.2	70	130				
Surr: Dibromofluoromethane	2,200		2,500		88.8	70	130				
Surr: Toluene-d8	2,400		2,500		95.8	70	130				
Sample ID: MBLK 1.0mL JW03	SampType: MBLK	TestCod	le: SW_8260S	Units: µg/Kg		Prep Dat	e.		RunNo: 126	87	
Client ID: PBS	Batch ID: R12687	TestN	lo: SW8260B			Analysis Dat	e: 4/4/200	7	SeqNo: 192	046	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	ND	50									
1,2,4-Trimethylbenzene	ND	50									
1,3,5-Trimethylbenzene	ND	50									
2-Methylnaphthalene	ND	250									
Benzene	ND	30			•						
Ethylbenzene	ND	50									
sopropylbenzene	ND	50									
Vethyl tert-butyl ether	ND	250									
	ND	250									
Naphthalene											
Naphthalene n-Propylbenzene	ND	50									

Qualifiers:

Manual Integration used to determine area response

RL Reporting Detection Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

Environmental Consulting & Technology, I

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RL Reporting Detection Limit

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

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TestCode: SW_8260S

Sample ID: MBLK 1.0mL JW03	SampType: MBLK	TestCoo	e: SW_8260S	Units: μg/Kg		Prep Da	ite:		RunNo: 126	887	
Client ID: PB\$	Batch ID: R12687	TestN	o: SW8260 B			Analysis Da	te: 4/4/200	7	SeqNo: 192	2046	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	ND	150									
Surr: 4-Bromofluorobenzene	2,400		2,500		94.3	70	130				
Surr: Dibromofluoromethane	2,200		2,500		89.3	70	130				
Surr: Toluene-d8	2,400		2,500		95.6	70	130				
Sample ID: 0703830-005AMS	SampType: MS	TestCod	e: SW_8260S	Units: µg/Kg-c	dry	Prep Da	te:		RunNo: 126	87	
Client ID: ZZZZZZ	Batch ID: R12687	TestN	o: SW8260 B			Analysis Da	te: 4/4/200	7	SeqNo: 192	2057	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	560	56	563.1	0	99.1	70	130				*******
1,2,4-Trimethylbenzene	590	56	563.1	0	105	70	130				
1,3,5-Trimethylbenzene	610	56	563.1	0	108	70	130				
2-Methylnaphthalene	380	280	563.1	0	68.1	70	130				S
Benzene	570	34	563.1	0	101	70	130				
Ethylbenzene	600	56	563.1	0	107	70	130				
Isopropylbenzene	620	56	563.1	0	110	70	130				
Methyl tert-butyl ether	1,100	280	1,126	0	99.1	70	130				
Naphthalene	540	280	563.1	0	95.8	70	130				
n-Propylbenzene	600	56	563.1	0	106	70	130				
Toluene	600	56	563.1	0	107	70	130				
Xylenes, Total	1,800	170	1,689	0	104	70	130				
Surr: 4-Bromofluorobenzene	2,600		2,815		93.4	70	130				
Surr: Dibromofluoromethane	2,500		2,815		89.1	70	130				
Surr: Toluene-d8	2,800		2,815		99.1	70	130				
Sample ID: 0703830-005AMSD	SampType: MSD	TestCod	e: SW_8260S	Units: µg/Kg-c	iry	Prep Da	te:		RunNo: 126	87	
Client ID: ZZZZZZ	Batch ID: R12687	TestN	o: SW8260B			Analysis Da	te: 4/4/200	7	SeqNo: 192	058	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trimethylbenzene	560	56	563.1	0	100	70	130	558.0	1.20	25	
1,2,4-Trimethylbenzene	600	56	563.1	0	106	70	130	590.1	1.23	25	
•	uantitation range ation used to determine area res	ponse		g times for preparation tected at the Reporting		exceeded		Analyte detected be RPD outside accep	-	lín	20

Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8260S

Sample ID: 0703830-005AMSD	SampType: MSD	TestCo	de: SW_82609	Units: μg/Κο	j-dry	Prep Da	ite:		RunNo: 12687		
Client ID: ZZZZZZ	Batch ID: R12687	TestN	lo: SW8260B			Analysis Da	ite: 4/4/200	7	SeqNo: 19	2058	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	610	56	563.1	D	108	70	130	605.9	0.278	25	
2-Methylnaphthalene	460	280	563.1	0	81.9	70	130	383.4	18.4	25	
Benzene	580	34	563.1	0	103	70	130	569.8	1.47	25	
Ethylbenzene	610	56	563.1	0	109	70	130	600.2	1.95	25	
Isopropylbenzene	630	56	563.1	0	111	70	130	622.2	0.542	25	
Methyl tert-butyl ether	920	280	1,126	0	81.3	70	130	1,117	19.8	25	
Naphthalene	550	280	563.1	0	96.9	70	130	539.4	1.14	25	
n-Propylbenzene	610	56	563.1	0	108	70	130	598.0	1.59	25	
Toluene	600	56	563.1	0	106	70	130	600.8	0.753	25	
Xylenes, Total	1,800	170	1,689	0	106	70	130	1,765	1.11	25	
Surr: 4-Bromofluorobenzene	2,700		2,815		94.9	70	130		0	25	
Surr: Dibromofluoromethane	2,500		2,815		89.9	70	130		0	25	
Surr: Toluene-d8	2,700		2,815		96.9	70	130		0	25	

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Manual Integration used to determine area response

RL Reporting Detection Limit

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8270S

R RPD outside accepted recovery limits

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Sample ID: LCS-6489	SampType: LCS	TestCo	de: SW_8270S	Units: µg/Kg		Prep Dat	e: 3/29/20	07	RunNo: 127	00	
Client ID: LCSS	Batch ID: 6489	Testi	No: SW8270C			Analysis Dat	e: 4/3/200	7	SeqNo: 192	1172	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
2-Methylnaphthalene	1,500	160	1,667	0	90.4	50	130				
Acenaphthene	1,700	160	1,667	0	103	50	130				
Acenaphthylene	1,600	160	1,667	0	96.8	50	130				
Anthracene	1,700	160	1,667	0	103	50	130				
Benz(a)anthracene	1,800	160	1,667	0	106	50	130				
Benzo(a)pyrene	1,800	160	1,667	0	109	50	130				
Benzo(b)fluoranthene	1,800	160	1,667	0	105	50	130				
Benzo(g,h,i)perylene	1,800	160	1,667	0	109	50	130				
Benzo(k)fluoranthene	1,900	160	1,667	0	114	50	130				
Chrysene	1,800	160	1,667	0	110	50	130				
Dibenz(a,h)anthracene	1,800	160	1,667	0	107	50	130				
luoranthene	1,700	160	1,667	0	104	50	130				
fluorene	1,800	160	1,667	0	108	50	130				
ndeno(1,2,3-cd)pyrene	1,800	160	1,667	0	109	50	130				
Naphthalene	1,600	160	1,667	0	93.2	50	130				
Phenanthrene	1,800	160	1,667	0	106	50	130				
Pyrene	1,800	160	1,667	0	111	50	130				
Surr: 2,4,6-Tribromophenol	1,700		1,667		103	50	130				
Surr: 2-Fluorobiphenyl	1,500		1,667		89,6	50	130				
Surr: 2-Fluorophenol	1,400		1,667		82.1	50	130				
Surr: Nitrobenzene-d5	1,500		1,667		91.8	50	130				
Surr: Phenol-d5	1,200		1,667		74.9	50	130				
Surr: Terphenyl-d14	1,800		1,667		106	50	130				
Sample ID: MB-6489	SampType: MBLK	TestCod	de: SW_8270S	Units: µg/Kg		Prep Dat	e: 3/29/20)7	RunNo: 127	00	
Client ID: PB\$	Batch ID: 6489	Test	lo: SW8270C			Analysis Dat	e: 4/3/200 1	7	SeqNo: 192	173	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
?-Methylnaphthalene	ND	160									
Acenaphthene	ND	160									
Acenaphthylene	ND	160									

ND Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8270S

Sample ID: MB-6489	SampType: MBLK	TestCod	de: SW_8270S	Units: μg/Kg		Prep Da	ite: 3/29/20	007	RunNo; 127	700	
Client ID: PBS	Batch ID: 6489	TestN	lo: SW8270C			Analysis Da	ite: 4/3/200)7	SeqNo: 192	2173	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Anthracene	ND	160									
Benz(a)anthracene	ND	160									
Benzo(a)pyrene	ND	160									
Benzo(b)fluoranthene	ND	160									
Benzo(g,h,i)perylene	ND	160									
Benzo(k)fluoranthene	ND	160									
Chrysene	ND	160									
Dibenz(a,h)anthracene	ND	160									
Fluoranthene	ND	160									
Fluorene	ND	160									
indeno(1,2,3-cd)pyrene	ND	160									
Naphthalene	ND	160									
Phenanthrene	ND	160									
Pyrene	ND	160									
Surr: 2,4,6-Tribromophenol	1,200		1,667		70.2	50	130				
Surr: 2-Fluorobiphenyl	1,300		1,667		79.4	50	130				
Surr: 2-Fluorophenol	1,300		1,667		78.1	50	130				
Surr: Nitrobenzene-d5	1,300		1,667		77,5	50	130				
Surr: Phenol-d5	1,200		1,667		70.0	50	130				
Surr: Terphenyl-d14	1,600		1,667		93.8	50	130				
Sample ID: 0703820-018B-MS	SampType: MS	TestCod	ie: SW_8270S	Units: µg/Kg-	iry	Prep Da	te: 3/29/20	07	RunNo: 127	700	
Client ID: ZZZZZZ	Batch ID: 6489	TestN	lo: SW8270C			Analysis Dat	te: 4/4/200	7	SeqNo: 192	2188	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	1,500	190	1,947	0	76.2	50	130				
Acenaphthene	1,600	190	1,947	0	83.1	50	130				
Acenaphthylene	1,500	190	1,947	0	79.2	50	130				
Anthracene	1,500	190	1,947	0	78.1	50	130				
Benz(a)anthracene	1,600	190	1,947	0	79.8	50	130				
Benzo(a)pyrene	1,500	190	1,947	0	77.5	50	130				

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

R RPD outside accepted recovery limits

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Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8270S

Sample ID: 0703820-018B-MS	SampType: MS	TestCo	de: SW_8270 S	Units: μg/K	g-dry	Prep Da	te: 3/29/20	07	RunNo: 12	700	
Client ID: ZZZZZZ	Batch ID: 6489	Testi	No: SW8270C			Analysis Da	te: 4/4/200	7	SeqNo: 19	2188	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(b)fluoranthene	1,700	190	1,947	0	85.7	50	130				
Benzo(g,h,i)perylene	1,300	190	1,947	0	68.4	50	130				
Benzo(k)fluoranthene	1,600	190	1,947	0	81.4	50	130				
Chrysene	1,600	190	1,947	0	82.3	50	130				
Dibenz(a,h)anthracene	1,400	190	1,947	0	71.4	50	130				
Fluoranthene	1,500	190	1,947	0	79.1	50	130				
Fluorene	1,700	190	1,947	0	86.8	50	130				
Indeno(1,2,3-cd)pyrene	1,300	190	1,947	. 0	68.4	50	130				
Naphthalene	1,600	190	1,947	0	81.2	50	130				
Phenanthrene	1,600	190	1,947	0	81.6	50	130				
Pyrene	1,800	190	1,947	0	92.3	50	130				
Surr: 2,4,6-Tribromophenol	1,700		1,947		86.3	50	130				
Surr: 2-Fluorobiphenyl	1,500		1,947		77.3	50	130				
Surr: 2-Fluorophenol	1,500		1,947		77.0	50	130				
Surr: Nitrobenzene-d5	1,600		1,947		82.7	50	130				
Surr: Phenol-d5	1,300		1,947		69.3	50	130				
Surr: Terphenyl-d14	1,800		1,947		90.7	50	130				
Sample ID: 0703820-018B-MS	SampType: MSD	TestCo	de: SW_8270S	Units: µg/K	g-dry	Prep Dat	te: 3/29/20	07	RunNo: 127	700	
Client ID: ZZZZZZ	Batch ID: 6489	TestN	lo: SW8270C			Analysis Dal	te: 4/4/200	7	SeqNo: 192	2189	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	1,200	190	1,947	0	63.0	50	130	1,484	19.0	25	
Acenaphthene	1,300	190	1,947	0	68.2	50	130	1,618	19.7	25	
Acenaphthylene	1,300	190	1,947	0	65.0	50	130	1,542	19.7	25	
Anthracene	1,300	190	1,947	0	65.3	50	130	1,520	17.8	25	
Benz(a)anthracene	1,200	190	1,947	0	63.4	50	130	1,555	23.0	25	
Benzo(a)pyrene	1,200	190	1,947	0	62.9	50	130	1,509	20.8	25	
Benzo(b)fluoranthene	1,400	190	1,947	0	71.7	50	130	1,668	17.7	25	
Benzo(g,h,i)perylene	1,000	190	1,947	0	53.3	50	130	1,331	24.7	25	

Qualifiers:

E Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

J Analyte detected below quantitation lin

R RPD outside accepted recovery limits

Page 34 of 37

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8270S

Sample ID: 0703820-018B-MS	SampType: MSD	TestCode: SW_8270S Units: µg/Kg-dry TestNo: SW8270C			j-dry	Prep Date: 3/29/2007 Analysis Date: 4/4/2007			RunNo: 12700 SeqNo: 192189		
Client ID; ZZZZZZ	Batch ID: 6489										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chrysene	1,300	190	1,947	0	64.9	50	130	1,602	23.6	25	
Dibenz(a,h)anthracene	1,100	190	1,947	0	56.5	50	130	1,389	23.2	25	
Fluoranthene	1,300	190	1,947	0	64.6	50	130	1,540	20.2	25	
Fluorene	1,400	190	1,947	0	71.1	50	130	1,689	19.9	25	
Indeno(1,2,3-cd)pyrene	1,000	190	1,947	0	53.3	50	130	1,331	24.7	25	
Naphthalene	1,300	190	1,947	0	65.5	50	130	1,580	21.4	25	
Phenanthrene	1,300	190	1,947	0	67.1	50	130	1,590	19.6	25	
Pyrene	1,500	190	1,947	0	75.4	50	130	1,797	20.1	25	
Surr: 2,4,6-Tribromophenol	1,200		1,947		60.5	50	130		0	25	
Surr: 2-Fluorobiphenyl	1,200		1,947		61.4	50	130		0	25	
Surr: 2-Fluorophenol	1,200		1,947		59.2	50	130		0	25	
Surr: Nitrobenzene-d5	1,300		1,947		66.3	50	130		0	25	
Surr: Phenol-d5	1,000		1,947		52.6	50	130		0	25	
Surr: Terphenyl-d14	1,400		1,947		70.6	50	130		0	25	

Qualifiers:

Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8310A

Sample ID: Ics-6440	SampType: Ics	TestCode: sw_8310a Units: µg/L Prep Date: 3/27/2007				07	RunNo: 12566 SeqNo: 190341				
Client ID: LCSW	Batch ID: 6440	TestNo: SW8310			Analysis Date: 3/28/2007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	19	1.0	27.50	0	67.9	70	130				S
Acenaphthene	50	1.0	50.00	0	101	70	130				
Acenaphthylene	36	1.0	50.00	O	72.6	70	130				
Anthracene	3.8	1.0	5.000	0	76.0	70	130				
Benz(a)anthracene	5.1	1.0	5.000	0	103	70	130				
Benzo(a)pyrene	5.2	1.0	5.000	0	104	70	130				
Benzo(b)fluoranthene	4.8	1.0	5.000	0	96.9	70	130				
Benzo(g,h,i)perylene	4.9	1.0	5.000	0	98.9	70	130				
Benzo(k)fluoranthene	5.1	1.0	5.000	0	102	70	130				
Chrysene	4.5	1.0	5.000	0	90.4	70	130				
Dibenz(a,h)anthracene	4.9	1,0	5.000	0	98.8	70	130				
Fluoranthene	5.1	1.0	5.000	0	101	70	130				
Fluorene	3.9	1.0	5.000	0	77.1	70	130				
Indeno(1,2,3-cd)pyrene	5.0	1.0	5.000	0	100	70	. 130				
Naphthalene	35	1.0	50.00	0	70.3	70	130				
Phenanthrene	4.0	1.0	5.000	0	79.3	70	130				
Pyrene	4.9	1.0	5.000	0	98.2	70	130				
Surr: p-Terphenyl	4.7		5.000		94.8	70	130				
Sample ID: Icsd-6440	SampType: lcsd	TestCode: sw_8310a Units: µg/L		Prep Date: 3/27/2007			RunNo: 12566				
Ctient ID: LCSS02	Batch ID: 6440	TestNo: SW8310				Analysis Date	3/28/2007		SeqNo: 190343		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	22	1.0	27.50	0	80.5	70	130	18.67	16,9	25	
Acenaphthene	57	1,0	50.00	0	114	70	130	50.48	12.2	25	
Acenaphthylene	40	1,0	50.00	0	79.4	70	130	36.31	8.93	25	
Anthracene	4.2	1.0	5.000	0	83.1	70	130	3.801	8.83	25	
Benz(a)anthracene	5.2	1.0	5.000	0	103	70	130	5.135	0.400	25	

Qualifiers:

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

E Value above quantitation range

Manual Integration used to determine area response

5.0

4.9

5.0

1.0

1.0

1.0

5.000

5.000

5.000

Reporting Detection Limit

0 H Holding times for preparation or analysis exceeded

0

0

101

97.7

99.1

70

70

70

130

130

130

Not Detected at the Reporting Limit

Spike Recovery outside accepted recovery limits

J Analyte detected below quantitation lin

3.58

0.780

0.194

RPD outside accepted recovery limits

5.225

4.845

4.946

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25

25

25

CLIENT:

Environmental Consulting & Technology, I

Work Order:

0703805

Project:

Federal Mogul #07-0197

QC SUMMARY REPORT

TestCode: SW_8310A

Sample ID: Icsd-6440	SampType: lcsd	TestCo	de: sw_8310a	Units: µg/L		Prep Da	te: 3/27/20	07	RunNo: 12	566	
Client ID: LCSS02	Batch ID: 6440	TestN	to: SW8310			Analysis Da	te: 3/28/20	07	SeqNo: 190	343	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	5.1	1.0	5.000	0	103	70	130	5.117	0.595	25	
Chrysene	4.4	1.0	5.000	0	88.2	70	130	4.518	2.36	25	
Dibenz(a,h)anthracene	5.1	1.0	5.000	0	102	70	130	4.942	3.39	25	
Fluoranthene	5.1	1.0	5.000	0	102	70	130	5.057	0.883	25	
Fluorene	4.1	1.0	5.000	0	81.9	70	130	3.857	6.00	25	
Indeno(1,2,3-cd)pyrene	5.1	1.0	5,000	0	101	70	130	5.024	0.781	25	
Naphthalene	40	1.0	50.00	0	79.1	70	130	35,14	11.8	25	
Phenanthrene	4.4	1.0	5.000	0	88.6	70	130	3.966	11.1	25	
Ругепе	4.8	1.0	5.000	0	95.3	70	130	4.910	3.03	25	
Surr. p-Terphenyl	5.0		5.000		99.1	70	130		: 0	25	

Qualifiers:

E Value above quantitation range

M Manual Integration used to determine area response

RL Reporting Detection Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

Analyte detected below quantitation lin

R RPD outside accepted recovery limits

D	ca.	

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDI/ PO BOX 30426, LANSING, MI 48909-7926, Phone 517-373-9837, Fax 517-373-2637, E-

STAFF INITIALS:	
SIMII HAHIMLS.	

DATE ENTERED INTO DATABASE

INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY. The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit this report within the stated time period may result in administrative penalties as provided for in Part 213, Section 21313a of 1994 PA 451, as amended. PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENT TO THE APPROPRIATE RRD DISTRICT OFFICE. SEE form eqp4410 for a complete list of REPORT AND ASSOCIATED ATTACHMENT TO THE APPROPRIATE RRD DISTRICT OFFICE.	RD district
STREET ADDRESS: 26555 Northwestern Highway	9
CITY: Southfield ZIP: 48033 COUNTY: Oakland	
DATE(S) RELEASE DISCOVERED: April 5, 2007 CONFIRMED RELEASE NUMBER(S): C-0080-07	
O/O NAME: Federal Mogul Corporation (Operator)	
O/O STREET ADDRESS: 26555 Northwestern Highway STATE: MI ZIP:	48033
CONTACT PERSON: Mark Bauer PHONE NUMBER: 248-354-8912	<u> </u>
ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):	
1. a. Has the UST been emptied? XYES NO (If no, explain why):	
b. Has the UST system been properly closed? XYES NO (If no, explain why):	
2. Free product present: a. Currently? YES NO If YES, total gallons recovered since last report:	
b. Previously? YES NO If YES, total gallons recovered to date:	
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)? YES NO	
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: 05. Estimated distance and direction from point of release to nearest:	
a. Private well: b. Municipal well: c. Surface water/wetland:	
none known within 1 mile none known within 1 mile none known within 1 mile	
6. Since last report: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: 0	
7. Totals to date: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: 0 8. Michigan RBCA Site Classification (1-4): 4 Previous RBCA Site Classification (1-4): 4	J
8. Michigan RBCA Site Classification (1-4): 4 Previous RBCA Site Classification (1-4): 4 9. Has contamination migrated off-site above Tier 1 Residential RBSLs YES NO	
If YES, have off-site impacted parties been notified (per Section 21309a(3) of Part 213) YES NO	
10. Is an institutional control required for contamination that has migrated or will migrate off-site? YES NO	
Has MTBE been detected in any groundwater sample? Maximum concentration of MTBE found	i in
Th. MTBE TYES NO ground water. Not detected CERTIFICATION OF REPORT COMPLETION	
I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attach	ments are
true, accurate, and complete. I certify that the report was submitted to the Remediation & Redevelopment Division (RRD) on October 22, 2008 (Date submitted REQUIRED)	
John D'Addona 10/22/08 John D'Addona PRINT OF PROJECT MANAGER'S NAME	
CP Original Signature - (REQUIRED) Date PRINT QC PROJECT MANAGER'S NAME	
John D'Addona Environmental Consulting & Technology, Inc. PRINT CP's Name NAME OF CONSULTING FIRM	•
CP ID 414 QC ID: <u>20062</u>	
ADDRESS 2200 Commonwealth Blvd., Suite 300, Ann Arbor, MI 48105 PHONE: 734-769-3004 FAX: 734-769-3164	*******
CERTIFICATION OF CLOSURE	TD
Type of RBCA Evaluation: ☑Tier 1 ☐Tier 2 ☐Tier 3 Closure report based on which type of land use?: ☑Residential ☐Commercial III ☐Commercial IV ☐Industrial 3. Institutional Controls: ☑None ☐Notice of Corrective Action ☐Restrictive Covenant ☐Other	
I certify under penalty of law that corrective actions associated with the above referenced release at this facility were completed in accordance Part 213, 1994 PA 451, as amended, and current departmental guidance and procedures available at the time the work was completed. I further certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly response gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations. CP Signature - (REQUIRED)	to assure

EQP3843 (REV. 2/2003)

Instructions - Utilize the following checklist to ensure that all required information is provided in the Closure Report. Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the Closure Report **must** be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

If an Initial Assessment Report (IAR) and/or a Final Assessment Report (FAR) have not been submitted for this release, provide all required information from the IAR and/or FAR not included below.

Section	n Table of Contents	Page
1.0	PROJECT CHRONOLOGY	
	A. Provide the date and time the confirmed release(s) was/were discovered and reported.	7
	B. Provide the IAR submittal date.	7
	C. Provide the FAR submittal date.	
	D. Provide dates for any other submittals.	7
	SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED	7
2.1	IMMEDIATE RESPONSE ACTION IMPLEMENTATION	
	If an IAR has not been previously submitted, provide all information requested in Section 1.0 of the IAR	8
2.2	FREE PRODUCT DISCOVERY AND REMOVAL	0
ı	f free product has not been discovered, then proceed to Section 2.3.	
	Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(xviii). Refer to the Storage Tank Division Operational Memorandum No. 7, Identification, Reporting, and Recovery of Free Product at LUST Sites.	8
E	 Attach a final RRD Free Product Recovery Status Report (EQP 3850) if not previously submitted. 	 8
2.3	SITE ASSESSMENT ACTIVITIES	
A	. If an IAR has not been previously submitted, provide all information requested in Section 3.0 of the IAR.	8
В	If a FAR has not been previously submitted, provide all information requested in Section 2.0 of the FAR.	8
2.4	SITE CLASSIFICATION	
A	Indicate the current Site Classification Level, in accordance with Storage Tank Division Operational Memorandum No. 5, Leaking Underground Storage Tank (LUST) Site	
	Classification. System.	10

	Table of Contents	Pa
В.	Provide a justification for the	
	Provide a justification for this classification. Identify the current conditions that are the basis of the classification.	۵
	and of the oldselfoll.	10
C.	Indicate whether the site classification has also	
	Indicate whether the site classification has changed since the submission of the last report.	
		11
2.5	TIERED EVALUATIONS AND CLEANUP GOALS	
Α.		
	Indicate whether a site-specific Tier II or Tier III evaluation has been conducted for this site.	2
		, 11
В.	If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumption	
	information were used in place of the default assumptions or site-specific Tank Division Operational Memorandum No. 4. Tigs 11 celebrates in the Storage	
	Tank Division Operational Memorandum No. 4, Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank (LUST) Or	
NO.	Corrective Action at Leaking Underground Storage Tank (LUST) Sites. TE: If a Tier II evaluation was performed and the storage Tank (LUST) Sites.	
exp	TE: If a Tier II evaluation was performed and described in the IAR or the FAR,	11
use	licitly indicate where different assumptions or site-specific information were din this Tier II or Tier III evaluation and why the charge information were	
	was justified.	
C. 1	Provide the calculations and reference sites:	
ı	elevant Tier II or Tier III SSTLs.	
D :	Drovide a tall to the	11
D. F	Provide a table which compares the maximum remaining contaminant concentrations or each required parameter for all media to the appropriate PROV.	
5	or each required parameter for all media to the appropriate RBSLs (as provided in the	
lo	Storage Tank Division Operational Memorandum No. 4), and/or the calculated SSTLs.	
		11
.6 N	IODELING	
Provi	de all modeling documentation. Refer to the Storage Tank Division Operational orandum No. 10 <i>Presentation of Tier 2 and 3 Groundwate</i> .	
Mem	orandum No. 10 <i>Presentation of Tier 2 and 3 Groundwater Modeling Evaluations</i> .	
7	Carron and the Carron of Groundwater Modeling Evaluations.	13
7 N	OTICES AND RESTRICTIONS	
If the	Closuro doco med	
resou	closure does not require the use of institutional controls to restrict land or rce use, then proceed to Section 2.8.	
	2001011	
NOTE	: Draft copies of all Restrictive Covenants and Notices of Corrective Action for the IRR f	•
Off-sit	e institutional controls must be submitted to the RRD for approval prior to Refer to Storage Tank Division Operational Momorand and Notices of Corrective Action for	
Contro	Refer to Storage Tank Division Operational Memorandum No. 12, Institutional	
Joini	ols and Public Notice Requirements and Procedures.	
A. Su	bmit copies of all notices or rootsistions at the	
filir	bmit copies of all notices or restrictions which have been filed, and provide proof of these notices or restrictions. If the person filing is not the great in the person filing is not the great provide proof of	
a c	ng these notices or restrictions which have been filed, and provide proof of opposition oppositions. If the person filing is not the property owner, attach opposition opposition opposition for the filing from the property owner.	
	me many morn the property owner.	NA
	ntify the individuals or segments of the public which have been provided with notice he proposed land use restrictions or limitations to be placed as	
B. Ide	he proposed land use restrictions or limitations to be placed on resource use.	
B. Ide of t	LIGE THE names and addition	
B. Ide of t	lic will be provided notice.	
B. Ide of t Incl	ude the names and addresses of the affected parties (unless large segments of the of that notice was provided to the affected parties.	

Sec	uz.		
Sec	uon	Table of Contents	Page
	C	Provide a map depicting the location(s) of the individuals or segments of the noticed public.	13
	D.	Describe any alternate mechanism utilized to restrict exposure to regulated substances as defined in Section 324.21310a(3), and justify how this mechanism reliably restricts exposure to the regulated substances.	13
2	.8	PERMITS	
	au	st all discharge permits and/or permit exemptions that were required for the corrective tion, and include the type of permit, permit number, application date, approval date and mination date.	13
2.	9	CORRECTIVE ACTION PLAN	
	A.	Summarize the corrective action activities that resulted in release closure. Include the operating history of any active treatment systems.	13
	В.	Summarize the types of monitoring activities performed, including the media and parameters monitored.	13
	C.	Attach performance monitoring data.	13
	D.	Describe and justify changes to the previously submitted Corrective Action Plan.	13
	E.	Provide the total volume of soil remediated, and include disposal location and proof of disposal (e.g., invoices, not load tickets) for all soils excavated subsequent to submittal of the last report, if appropriate.	13
	F.	Provide the total volume of groundwater actively remediated to date, and include disposal documentation, if appropriate.	13
3.0	CL	OSURE VERIFICATION SAMPLING	
3.	l	SOIL CLOSURE VERIFICATION	
	iae	TE: Verification sampling must be conducted whenever contaminated soils are ntified but not remediated, including when contaminated soil is returned to an avation after the removal of a UST.	•
	A.	Describe the soil verification sampling strategy applied at the site by providing the following:	
		1. A scaled site map which identifies the former extent of the soil contamination, and the soil verification sampling locations relative to existing site features. (Multiple chemical contaminants and multiple sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)	
		2. For a corrective action involving excavation, a scaled drawing(s) showing the floor and walls of the excavation and the associated sampling locations. The drawing should also depict the subsurface stratigraphy, soil types, fractures, discolored soil locations, adjoining conduits or potential migration pathways, and locations of	14
		former and existing UST system components, as appropriate.	14

	Table of Contents	Pa
	2 A deposite to the state of th	
	3. A description of how the number and location of samples collected for soil verification purposes was established. If your sampling strategy differs from the MDEQ <i>Verification of Soil Remediation Guidance Document</i> and Storage Tank Division Operational Memorandum No. 9, <i>Groundwater and Soil Closure Verification Guidance</i> , provide justification.	
	4. A list of the analytical parameters used to verify the soil remediation	14
	5. A justification if all soil verification samples were not analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.	
В	Provide a table with laboratory data showing the results of all verification soil sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases. The table should include the	
	following: 1. Sample ID	14
	2. Sample depth	
	3. Date of collection	
	4. Dates of extraction and analysis5. Method Detection Limits	
	6. Analytical method	
10	IOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody rms, and all available QA/QC information.) Provide copies of all soil boring logs not previously submitted.	14
.2	GROUNDWATER CLOSURE VERIFICATION	
A.	Describe the groundwater verification sampling strategy applied at the site by providing the following:	
	1. A scaled site map which identifies the former extent of groundwater contamination, the groundwater verification sampling locations relative to existing site features, and the groundwater flow direction(s). (Multiple chemical contaminants and multiple aquifer/sample depths should be addressed on the minimum number of site maps	
	needed to convey the information with clarity and legibility.)	• 15
	2. A description of how the sampling frequency and duration of sampling for groundwater verification purposes was established. If your sampling strategy differs from the Storage Tank Division Operational Memorandum No. 9	15
	differs from the Storage Tank Division Operational Memorandum No. 9. 3. A list of the analytical parameters used to verify groundwater closure.	
	differs from the Storage Tank Division Operational Memorandum No. 9. 3. A list of the analytical parameters used to verify groundwater closure 4. A justification if all groundwater verification samples were not analyzed preserved.	15 15
	groundwater verification purposes was established. If your sampling strategy differs from the Storage Tank Division Operational Memorandum No. 9	

etion	Table of Contents	Pag
	1. Sample ID	15
	2. Sampling depth or screened interval	15
	3. Date of collection	15
	4. Dates of extraction and analysis	15
	5. Method Detection Limits	15
	6. Analytical method	15
(NO fori	OTE: The RRD may request copies of the laboratory data sheets, chain-of-custody ms, and all available QA/QC information.)	
C.	Attach copies of the following:	
	Boring logs not previously submitted.	15
	2. Well construction diagrams not previously submitted.	15
	3. Potentiometric surface maps for each groundwater verification sampling event.	15
	4. Elevation data (USGS datum preferred), including top-of-casing and grade	
	elevations, and depth to groundwater for each groundwater verification sampling event.	
	event.	15
3.3	CLOSURE VERIFICATION FOR OTHER MEDIA	
A.	Describe the verification sampling strategy for other media applied at the site.	15
В.	Provide a scaled site map which identifies the verification sampling locations relative to	
(existing site features and boundaries, if appropriate.	15
C.	Provide a table with the laboratory data showing the results of all verification sampling	
l	performed to date in the other specified environmental media.	15
(NO	TE: The RRD may request copies of the laboratory data sheets, chain-of-custody	
(is, and all available QA/QC information.)	

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

1.0 PROJECT CHRONOLOGY

- **A.** The release was confirmed on April 5, 2007. The release was reported by fax on May 4, 2007.
- B. The IAR was submitted on August 2, 2007.
- C. A FAR has not been submitted.
- **D.** No reports have been submitted.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

2.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED

2.1 IMMEDIATE RESPONSE ACTION IMPLEMENTATION

An IAR has been submitted. Refer to the IAR for details related to the initial responses to the release.

2.2 FREE PRODUCT DISCOVERY AND REMOVAL

Free product has not been discovered.

2.3 SITE ASSESSMENT ACTIVITIES

- **A.** The IAR has been previously submitted. Site characterization information may be found in Section 3.0 of the IAR.
- **B.** A FAR has not been previously submitted. Many items in Section 2.0 of a FAR are redundant and the information has not changed since the submission of the IAR.

Scaled Site Maps

There is no additional information beyond the IAR. The scaled maps used for Section 3.1 of the IAR are still relevant and up-to-date. The following information summarizes the scaled site maps that were discussed in the IAR.

Figure 1 is a scaled area map which utilizes the USGS 7.5-minute topographic map of Oakland County (T1N-R10E). Figure 1 includes the site in relation to the surrounding area and nearby major roads and surface water bodies. There are no surface waters, off-site wells, or delineated well-head protection areas within one mile of the release.

Figure 2 is a scaled site map which includes the building on-site, the former UST system location and the location of the groundwater monitoring wells. It is unknown whether the release was from the UST system or a surface spill(s) as fuel was dispensed. Monitoring well locations are shown in Figure 2.

Scaled Cross-Sectional Diagrams

There is no additional information beyond the IAR. The scaled cross-sectional diagrams used for Section 3.2 of the IAR are still relevant and up-to-date.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

Delineation of the Extent of Contamination

Additional site assessment delineation activities were not conducted subsequent to the submission of the IAR. However, three additional quarterly groundwater monitoring events were completed to support site closure. The groundwater monitoring events included the collection of groundwater samples from the four wells (MW-1 to MW-4) as well as the collection of a water sample from the catch basin nearest to the former UST system area. The Work Plan was implemented as outlined in the IAR.

Soil Conditions and Characteristics

There is no additional information beyond the IAR. The information provided for Section 3.3 of the IAR is still relevant and up-to-date.

Groundwater Conditions and Characteristics

The following information summarizes the groundwater conditions and characteristics that were discussed in the IAR. Updated information includes the detailed groundwater results in Appendix A.

which is at the base of the ramp leading to the underground parking garage. "Finger drains" beneath the pavement direct groundwater to a catch basin located southeast of the former UST system area which discharges to a water collection system. The catch basin also collects and discharges storm water runoff and snowmelt to the collection system piping where it mixes with the groundwater from the finger drains. The collected water flows via piping to a sump in the building that in turn pumps the collected water to the storm sewer system in the parking area south of the building. Storm water from the parking area, including the sump water, flows southeast approximately 1 mile where it discharges to an open drain.

The catch basin closest to MW-1 is approximately 27 ft southeast of MW-1 and 14 ft east-southeast of the former UST excavation boundary. The water entering the collection system at the catch basin is not impacted by the UST release based on the groundwater flow direction (southwest) and supported by the catch basin sampling results. The quarterly monitoring events included the sampling of the collection system at the catch basin.

Groundwater depth was determined with a water level probe. The static water elevation data at MW-1 was not available in April 2008 because upon opening the well, the groundwater stabilized above

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

the top of casing. A temporary riser extension was immediately placed to prevent the water from re-entering MW-1.

Groundwater is approximately 12 feet below the ground surface at MW-3 and MW-4 which are outside the ramp to the underground parking area and is in an aquifer. Groundwater flow direction is to the southwest and is shown for April 2008 in Figure 3 and for each quarterly event in Appendix G. The calculated groundwater gradient varied from 0.03 to 0.096 ft/ft over the four quarterly groundwater events. The April 2008 groundwater elevation data for the four monitoring wells is included in Figure 3.

- b) Boring logs and well construction diagrams were included in the IAR.
- c) Four groundwater monitoring wells were installed as part of the initial assessment. The screened intervals for the monitoring wells were shown on the soil boring logs in the IAR. The maximum contaminant concentrations encountered during the most recent quarterly monitoring event are shown in Figure 4 and detailed in a table in Appendix A.
- d) Only one groundwater unit has been encountered.
- e) No groundwater remediation activities have been performed to date subsequent of the IAR.
- f) Based on the direction of groundwater flow, the low contaminant concentrations encountered, and the location of the building, no impacted groundwater is expected to extend offsite.
- **g)** Appendix A includes all laboratory data for groundwater samples. Appendix B includes the laboratory reports, the chain-of-custodies, and all available QA/QC information.
- h) Appendix C compares the maximum groundwater contaminant concentrations (from the April 2008 quarterly sampling event) to the appropriate RBSLs.
- i) A chronological summary of the results for each sampling location is included in Appendix D.
- j) There is no known groundwater contamination not related to the UST release at this site except for the dissolved lead at MW-4

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

(upgradient). It is expected that the dissolved lead at this location is naturally occurring.

Conditions and Characteristics in Other Environmental Media

There is no additional information beyond the IAR. The information provided for Section 3.5 of the IAR is still relevant and up-to-date.

2.4 SITE CLASSIFICATION

- A. The site has been classified as a Class 4 site.
- **B.** There are no demonstrable long-term threats to human health, safety, or sensitive environmental receptors. In addition:
 - No vapors are present
 - Groundwater is contaminated below drinking water RBSLs or the groundwater use is reliably restricted
 - Soil is contaminated below leaching to groundwater RBSLs
 - Soil and groundwater contamination are below direct contact RBSLs
 - Soil and groundwater contamination are below volatilization criteria
 - There is no potential for contamination to affect sensitive habitat or resources
- **C.** There has been no classification change since the submission of the last report.

2.5 TIERED EVALUATIONS AND CLEANUP GOALS

- A. There have been no site specific evaluations.
- **B.** Not applicable. Alternate assumptions or site-specific information were not used in place of default assumptions.
- C. Tier II or Tier III SSTLs were not used. Calculations and reference citations are not applicable.
- D. Appendix C provides a groundwater comparison table, which compares the maximum contaminant concentrations in groundwater for each required parameter to the appropriate Tier I RBSLs.

Groundwater - Drinking Water Criteria

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

The drinking water criteria are relevant and applicable for this site. Levels of all constituents in the four monitoring wells have been consistent and below residential drinking water criteria for the last three quarterly sampling events (March 2007 to April 2008).

Only trace levels of lead concentrations were found in the source area at MW-1. Lead concentrations at MW-2 decreased from March 2007 to April 2008. The subsequent three samples from MW-2 were all below the reporting limits. It is likely that the higher lead concentration in March 2007 was either naturally occurring or lab error. The lead concentrations at MW-4 varied from non-detects to 6.0 ug/L during the quarterly groundwater sampling events. MW-4 was consistently upgradient of the release during the four quarterly events. Lab results indicate no detections of VOCs or PAHs. Therefore, the presence of lead in the MW-4 samples is likely naturally occurring.

Groundwater - GSI Criteria

Due to the substantial distance from the site to the nearest surface water body via the shallow aquifer, the groundwater to surface water pathway is not relevant to this site. During both high and low groundwater levels through the four quarterly monitoring events, the groundwater flow direction remained consistent to the southwest, away from the collection system catch basin. Flow via the groundwater to the Rouge River is over a mile in that direction.

Concentrations in the storm water collection system were typically trace levels of semi-volatiles except during the January 2008 event (Appendix D). During that event, elevated concentrations of semi-volatiles were detected in the sample. With delivery trucks docking just south of MW-2, it is probable that oil or fuel drips/leaks from vehicles that eventually migrated from the asphalt to the catch basin during the snow melt runoff. Based on the distance to the nearest surface water and the relatively low contaminant concentrations, GSI is not a preferential pathway and GSI criteria are not applicable to this site.

<u>Groundwater - Volatilization to Indoor Air and Groundwater Direct</u> <u>Contact</u>

The groundwater concentrations are all below the volatilization to indoor air criteria and the groundwater direct contact criteria.

Soil Criteria

Soil concentrations are all below residential soil criteria. Appendix E provides a soil comparison table, which compares the maximum

REMEDIATION AND REDEVELOPMENT DIVISION NOT THE PARTITION OF ENVIRONMENTAL QUALITY CLOSURE REPORT (CONTINUED)

remaining contaminant concentrations in soil for each required parameter to the appropriate Tier I RBSLs. MODELING

2.6

Modeling was not necessary and therefore not used for site closure. Therefore, modeling documentation is not applicable.

2.7 NOTICES AND RESTRICTIONS

The closure does not require the use of institutional controls to restrict land or resource use. **PERMITS**

2.8

Permits were not required for a corrective action.

2.9 CORRECTIVE ACTION PLAN

- A. The site did not require any corrective action activities.
- **B.** Three additional quarterly monitoring events of MW-1 to MW-4 occurred subsequent to the IAR. Groundwater was collected during the events and analyzed for leaded and unleaded gasoline parameters, as recommended in STD Operational Memorandum Number 14. In addition, polynuclear aromatic hydrocarbons were also
- C. Since no corrective action activities were performed, performance
- D. The follow-up activities proposed in the IAR included site closure utilizing institutional controls (deed restriction) and groundwater monitoring. Quarterly groundwater monitoring was completed for a period of 1 year to support site closure. The quarterly groundwater monitoring results indicated conditions that no longer warrant institutional controls.
- E. No soil has been remediated to-date in response to release discovery.
- F. No groundwater has been remediated to-date in response to release

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

3.0 <u>CLOSURE VERIFICATION SAMPLING</u>

3.1 SOIL CLOSURE VERIFICATION

A. Figure 5 is a site map which identifies the extent of soil contamination relative to existing site features. It should be noted that groundwater in the vicinity of MW-1 is within inches of ground surface; therefore, a soil sample in the capillary fringe is not available.

Soil borings were advanced using 4½-inch inner diameter hollow-stem augers (HAS) and samples were retrieved using a Geoprobe in order to retain undisturbed soil prior to advancing the HAS. Four (4) soil borings were performed at locations referenced as (MW-1 through MW-4). Information pertaining to the specific location of the borings is provided in Figure 2 – Former UST Site Plan. Individual soil boring logs were presented in the IAR. Soil samples were retrieved continuously during advancement of each soil boring. Retrieved soil samples were collected in continuous increments and field-screened utilizing a calibrated Organic Vapor Meter (OVM). The soils encountered at each boring were classified and logged in accordance with the Unified Soil Classification System. OVM screening responses for each interval retrieved is provided on the individual soil boring logs.

The borings were primarily advanced until groundwater was encountered. In addition, MW-1 was advanced to 20 feet below ground level (bgl) or an estimated 15-17 below the first saturated interval to define the vertical extent of potential impact and to provide further information concerning the local geological formation below the saturated interval. In this boring the sample retrieved from the interval of 18-19 feet was designated as sample (SB-1, MW-1 @ 18-19 ft). This soil sample was collected, preserved, field-screened, handled, and tested in accordance with Michigan Department Environmental **Quality** (MDEQ) protocols and Operational Memorandum 2. This specified sample was submitted under standard Chain-of-Custody protocols to RTI Laboratories, Inc. (RTI) for analysis in accordance with Metals/Lead, ICP/MS SW6020A, Polynuclear Aromatic Hydrocarbons Semi-Volatile Organic Compounds, SW8270C, Volatile Organic Compounds - ULG List, SW8260B and Percent Moisture, D2216.

- **B.** Appendix F provides a results table for all soil sampling performed to date for the required parameters.
- C. All boring logs have been previously submitted in the IAR.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

3.2 GROUNDWATER CLOSURE VERIFICATION

A. Figure 4 is a site map which identifies the extent of groundwater contamination relative to existing site features. Figure 3 is a site map which shows the potentiometric contours and the groundwater flow direction, which is to the southwest.

Groundwater verification was established in accordance with the STD Operational Memorandum No. 9. Four quarterly monitoring events were conducted over the course of one year.

Groundwater samples were collected, preserved, handled, and tested in accordance with Michigan Department of Environmental Quality (MDEQ) protocols and Operational Memorandum 2. The samples were submitted under standard Chain-of-Custody protocols to RTI Laboratories, Inc. (RTI) for analysis in accordance with Metals/Lead, ICP/MS SW6020A, Polynuclear Aromatic Hydrocarbons Semi-Volatile Organic Compounds, SW8270C, Volatile Organic Compounds – Unleaded Gasoline List, SW8260B and Percent Moisture, D2216.

- **B.** Appendix A provides a results table for all groundwater sampling performed to date for the required parameters.
- C. Boring logs and well construction diagrams were included in the IAR. Potentiometric surface maps for each groundwater verification sampling event are included in Appendix G. Appendix H includes elevation data, including top-of-casing and grade elevations, and depth to groundwater for each groundwater verification sampling event.

3.3 CLOSURE VERIFICATION FOR OTHER MEDIA

- A. Verification sampling for other media was not required.
- **B.** Verification sampling for other media was not required; therefore, the scaled site map is not applicable.
- **C.** Verification sampling for other media was not required; therefore, the table with laboratory data is not applicable.

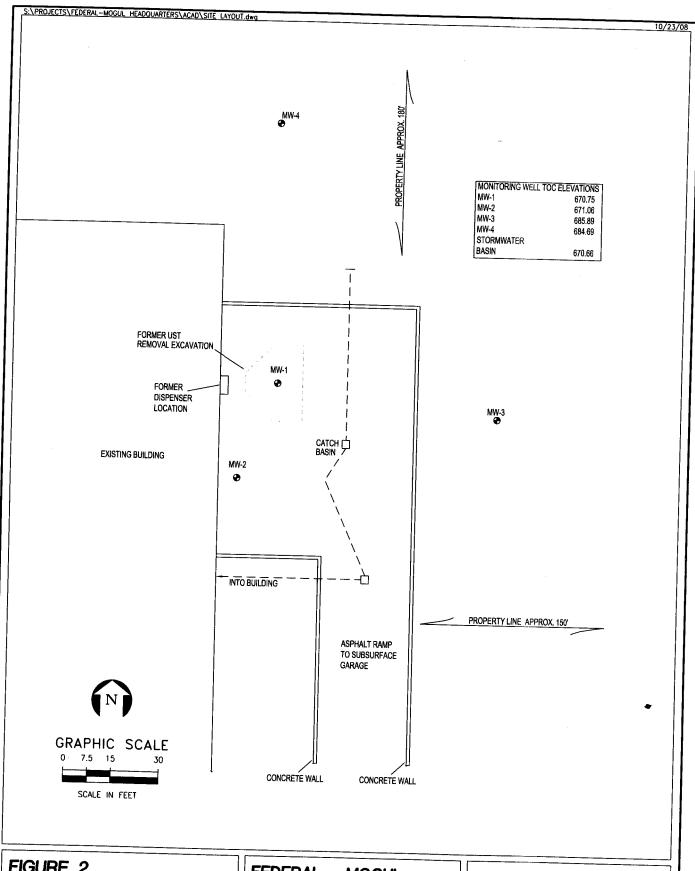


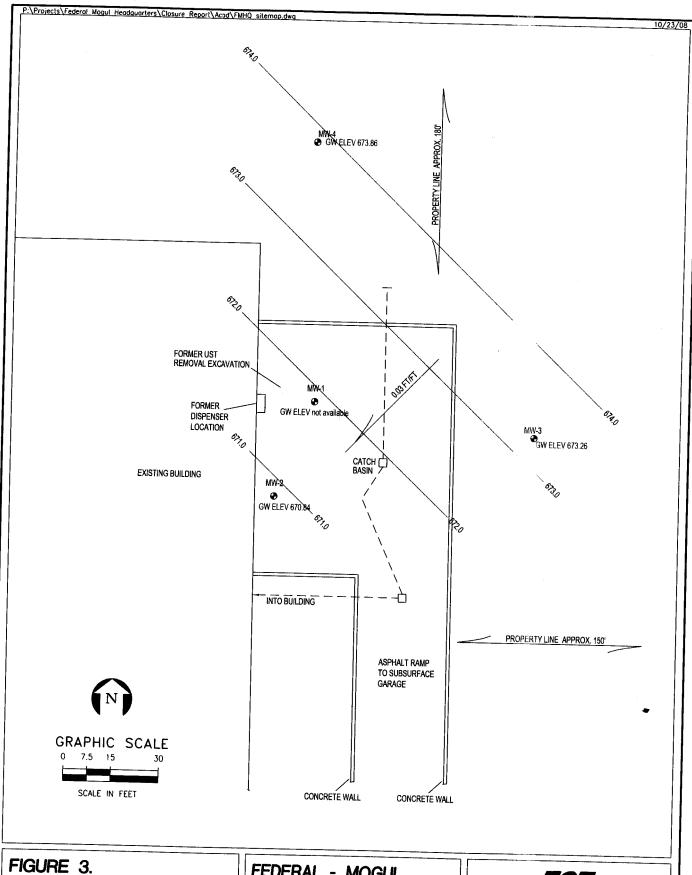
FIGURE 2. FORMER UST SITE PLAN

Source: ECT, 2007.

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ECT

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FORMER UST GROUNDWATER DIAGRAM

Source: ECT, 2008.

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ECT

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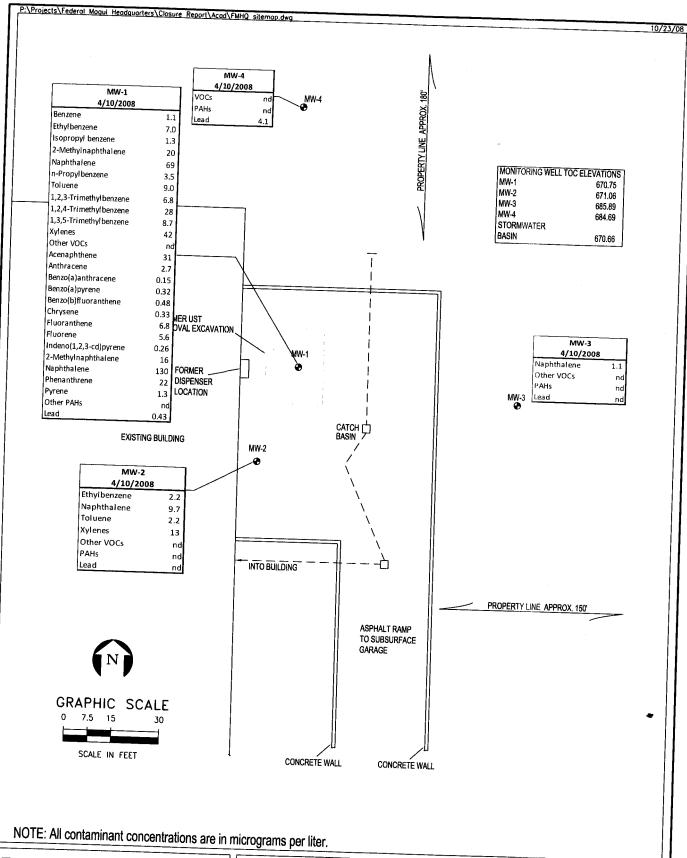


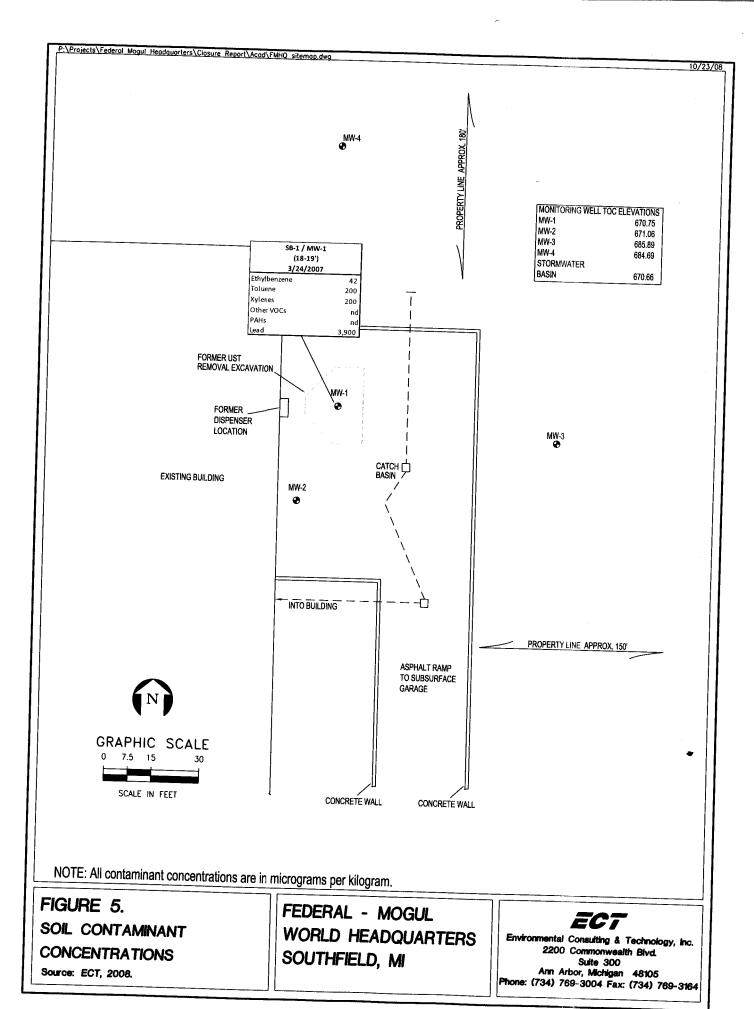
FIGURE 4.
GROUNDWATER CONTAMINANT
CONCENTRATIONS

Source: ECT, 2008.

FEDERAL - MOGUL WORLD HEADQUARTERS SOUTHFIELD, MI

ECT

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION REDEVELOPMENT DIVISION

CLOSURE REPORT (CONTINUED)

APPENDIX A

GROUNDWATER SAMPLING RESULTS (LABORATORY)

FACILITY NAME: Federal-Mogul Corporation

World Headquarters

Sample ID						100	2000	A. 25 (A. 25
Sample Depth (feet BGS)		MW-1		MW-1		MW-1		Antas I
Date Collected						10100-7		MW-1
Date Extracted		3/25/07		9/27/07		1/31/08		1/10/00
Date Analyzed		3/30/07		10/2/07		2/1/08		4/10/08
Analytical Method No.		3/30/07		10/2/07		2/1/08		4/14/08
Collection Method*		SW8260B		SW8260B		SW8260B		4/14/08 SW8260B
CONSTITUENT (ug/L)		PP		PP		PP		PP
X Benzene	Con	c MD 8.5			DL Co	nc MI	DL Con	
X Ethylbenzene			1.0	1.3	1.0	1.7		1.1
X Isopropylbenzene			1.0	6.0	1.0	7.0	1.0	7
X 2-Methylnaphthalene			1.0	1.1	1.0	1.3		1.3
X Methyl tert-butyl ether			5.0	28	5.0	25	5.0	20
X Naphthalene			5.0	ND	5.0	ND		ND
X n-Propylbenzene			5.0	90	5.0	79		69
X Toluene				2.9	1.0	3.4		3.5
X 1,2,3-Trimethylbenzene					1.0	14	1.0	9
X 1,2,4-Trimethylbenzene					1.0	7.6		5.8
X 1,3,5-Trimethylbenzene			0		1.0	30		28
X Xylenes					1.0	9.3		1.7
		30 3	.0	33	3.0	47		42
METALS								'`
Sample ID		ЛW-1						
Sample Depth (feet BGS)	<u></u>	*144.1		MW-1		MW-1	N	лw-1
Date Collected Date Extracted	3/	25/07	+	10-11-				
Date Extracted Date Analyzed		28/07		/27/07	1	/31/08	4/	10/08
		28/07		0/2/07		2/5/08		11/08
Analytical Method No. Collection Method*		6020A		0/2/07		2/5/08		11/08
CONSTITUENT (ug/L)		PP	34	V6020A PP	S\	V6020A		6020A
X Lead	Conc	MDL	Conc	MDL	 	PP		PP
. Ceau	0.23				Conc	MDL	Conc	MDL
POLYNUCLEAR AROMATICS (PNAS)			0.0	1	.0 2	.9 1	.0 0.4	3 3
Sample ID								
ample Depth (feet BGS)	M	W-1		1W-1		2007-40-MPRE, 8037-25		
Pate Collected			<u>'</u>			/IW-1	M	W-1
ate Extracted	3/2	5/07	9/	27/07	 	24 /00		
ate Analyzed	3/2	9/07		/1/07		31/08		0/08
nalytical Method No.	3/2	9/07		/1/07		/4/08		5/08
ollection Method*	SW	3310		8310		/4/08 /8310		5/08
ONSTITUENT (ug/L)	P	Р		PP		bb 19310		3310
Acenaphthene	Conc	MDL	Conc	MDL	Conc	MDL		P
Acenaphthylene	19	1.0	19				Conc	MDL
Anthracene	ND ND	1.0	3.8				1 31	1.:
Benzo(a)anthracene	1.9	1.0	2.9				110	1.1
Benzo(a)pyrene	0.34	1.0	0.29	1.0		****		1.1
		1.0	ND	1.0			1	1.1
Benzo(b)fluoranthene	0.21		ND	1.0	1.1		3.32	1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene	ND	1.0	NU					1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	ND ND	1.0	ND ND	1.0	1.0		וטוח ו	1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	ND ND ND	1.0 1.0	ND ND		1.0 0.79			
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene	ND ND ND 0.19	1.0 1.0 1.0	ND	1.0	0.79	1.0	ND	1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene	ND ND ND 0.19	1.0 1.0 1.0 1.0	ND ND 0.33 ND	1.0 1.0	0.79 1.1	1.0 1.0	ND 0.33	1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	ND ND ND 0.19 ND 4.4	1.0 1.0 1.0 1.0	ND ND 0.33 ND 6.3	1.0 1.0 1.0	0.79	1.0 1.0 1.0	ND 0.33 ND	1.1 1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene	ND ND ND 0.19 ND 4.4 4.3	1.0 1.0 1.0 1.0 1.0	ND ND 0.33 ND	1.0 1.0 1.0 1.0	0.79 1.1 1.6 7.4	1.0 1.0 1.0 1.0	ND 0.33 ND 6.8	1.1 1.1 1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene	ND ND ND 0.19 ND 4.4 4.3 ND	1.0 1.0 1.0 1.0 1.0 1.0	ND ND 0.33 ND 6.3	1.0 1.0 1.0 1.0	0.79 1.1 1.6 7.4 6.2	1.0 1.0 1.0 1.0	ND 0.33 ND 6.8 5.6	1.1 1.1 1.1 1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene	ND ND ND 0.19 ND 4.4 4.3 ND 49	1.0 1.0 1.0 1.0 1.0 1.0 1.0	ND ND 0.33 ND 6.3 5.4 ND	1.0 1.0 1.0 1.0 1.0	0.79 1.1 1.6 7.4 6.2 1.2	1.0 1.0 1.0 1.0 1.0	ND 0.33 ND 6.8 5.6 0.26	1.1 1.1 1.1 1.1 1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene Phenanthrene	ND ND ND 0.19 ND 4.4 4.3 ND 49	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	ND ND 0.33 ND 6.3 5.4 ND 40	1.0 1.0 1.0 1.0 1.0 1.0	0.79 1.1 1.6 7.4 6.2	1.0 1.0 1.0 1.0 1.0 1.0	ND 0.33 ND 6.8 5.6 0.26	1.1 1.1 1.1 1.1 1.1
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	ND ND ND 0.19 ND 4.4 4.3 ND 49	1.0 1.0 1.0 1.0 1.0 1.0 1.0	ND ND 0.33 ND 6.3 5.4 ND	1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.79 1.1 1.6 7.4 6.2 1.2 24	1.0 1.0 1.0 1.0 1.0	ND 0.33 ND 6.8 5.6 0.26	1.1 1.1 1.1 1.1 1.1

N/A = Not Available

NYA = NOL AVAINDRE

* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Peristaltic Pump (PP)

A- I

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

APPENDIX A

GROUNDWATER SAMPLING RESULTS (LABORATORY)

FACILITY NAME: Federal-Mogul Corporation

World Headquarters

FACILITY NUMBER: 50005609

FACILITY NUMBER: 50005609								
VOLATILES								
Sample ID	M\	N-2	M۱	N-2	M\	N-2	MV	V-2
Sample Depth (feet BGS)								
Date Collected	3/2	5/07	9/2	7/07	1/3	1/08	4/10	0/08
Date Extracted	3/3	0/07	10/	3/07	2/1	./08	4/15	5/08
Date Analyzed	3/3	0/07	10/3	3/07	2/1	/08	4/15	5/08
Analytical Method No.	SW8	260B	SW8	260B	SW8	260B	SW8	260B
Collection Method*	P	P	P	P	Р	P	P	Р
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
X Benzene	0.6	1.0	ND	1.0	ND	1.0	ND	1.0
X Ethylbenzene	5.7	1.0	ND	1.0	ND.	1.0	2.2	1.0
X Isopropylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0
X 2-Methylnaphthalene	ND	5.0	ND	5.0	ND	5.0	ND	5.0
X Methyl tert-butyl ether	ND	5.0	ND	5.0	ND	5.0	ND	5.0
X Naphthalene	11	5.0	3.0	5.0	2.3	5.0	9.7	5.0
X n-Propylbenzene	ND	1.0	ND	1.0	ND	1.0		1.0
X Toluene	5	1.0	ND	1.0	ND	1.0		1.0
X 1,2,3-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0		1.0
X 1,2,4-Trimethylbenzene	0.6	1.0	ND	1.0	ND	1.0		1.0
X 1,3,5-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0	ND	1.0
X Xvlenes	42	3.0	ND	3.0	ND ND	3.0		3.0
v v i v v v v v v v	42	3.0	NU	3.0	טאו	3.0	13	3.0
METALS								
	NAS	N-2	NA)	N-2	0.41	V-2	NAV.	V-2
Sample ID	IVIV	IV-2	1017	V-Z	IVIV	V-Z	1010	V-Z
Sample Depth (feet BGS)	2/2	F /07	0/2	7/07	1/2:	1 /00	0/10	2/00
Date Collected		5/07		7/07		1/08		0/08 1/08
Date Extracted		8/07		2/07	2/5/08 2/5/08			
Date Analyzed		8/07		2/07				1/08
Analytical Method No.		020A		020A		020A	SW6020A PP	
Collection Method*		P	۲	Р	P	Р	P	
		1	_		l		_	
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
X Lead	Conc 13	MDL 1.0	Conc 0.26		Conc 0.21	MDL 1.0		MDL 3.0
X Lead	13				0.21			
X Lead POLYNUCLEAR AROMATICS (PNAs)	13	1.0	0.26	1.0	0.21	1.0	ND	3.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID	13		0.26		0.21		ND	
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS)	13 M\	1.0 N-2	0.26 M\	1.0 W-2	0.21 M\	1.0 W-2	ND MV	3.0 V-2
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected	13 M\ 3/2	1.0 N-2 5/07	0.26 M\ 9/2	1.0 N-2 7/07	0.21 M\ 1/3	1.0 V-2 1/08	MV 4/10	3.0 V-2 D/08
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted	13 MV 3/2 3/2	1.0 N-2 5/07 9/07	0.26 M\ 9/2 10/	1.0 N-2 7/07 1/07	0.21 MV 1/3 2/4	1.0 V-2 1/08	MV 4/10 4/15	3.0 V-2 D/08 5/08
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed	13 M\ 3/2: 3/2: 3/2:	1.0 N-2 5/07 9/07 9/07	9/2 10/	1.0 W-2 7/07 1/07 1/07	0.21 M\ 1/3 2/4 2/4	1.0 N-2 1/08 1/08	MV 4/10 4/11 4/12	3.0 V-2 D/08 5/08 5/08
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No.	3/2 3/2 3/2 SW	1.0 N-2 5/07 9/07 9/07 8310	9/2 10/ 5W4	1.0 N-2 7/07 1/07 1/07 3310	0.21 M\ 1/3 2/4 2/4 SW8	1.0 N-2 1/08 -/08 -/08 3310	MV 4/10 4/1: 4/1: SW8	3.0 N-2 D/08 5/08 5/08 3310
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method*	3/2 3/2 3/2 SW	1.0 N-2 5/07 9/07 9/07	9/2 10/ 5W4	1.0 W-2 7/07 1/07 1/07	0.21 M\ 1/3 2/4 2/4 SW8	1.0 N-2 1/08 1/08	MV 4/10 4/1: 4/1: SW8	3.0 V-2 D/08 5/08 5/08
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L)	3/2 3/2 3/2 SW	1.0 N-2 5/07 9/07 9/07 8310	9/2 10/ 5W4	1.0 N-2 7/07 1/07 1/07 3310	0.21 M\ 1/3 2/4 2/4 SW8	1.0 N-2 1/08 -/08 -/08 3310	MV 4/10 4/11 4/11 SW8 P	3.0 N-2 D/08 5/08 5/08 3310
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method*	3/2 3/2 3/2 3/2 SW: F Conc	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0	0.26 MN 9/2 10/ 10/ SW8 F Conc ND	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0	0.21 MV 1/3 2/4 SW8 F Conc	1.0 N-2 1/08 -/08 -/08 3310 PP MDL 1.0	MV 4/10 4/11 4/11 SW8 P Conc	3.0 V-2 D/08 5/08 5/08 3310 P
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L)	3/2 3/2 3/2 3/2 SW: F Conc ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0	9/2 10/ 10/ 5W3 F Conc ND	1.0 N-2 7/07 1/07 1/07 3310 PP MDL 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND	1.0 N-2 1/08 -/08 -/08 3310 PP MDL 1.0	MV 4/10 4/11 4/12 SW8 P Conc ND	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene	3/2 3/2 3/2 3/2 SW: F Conc	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0	0.26 MN 9/2 10/ 10/ SW8 F Conc ND ND 0.22	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene	3/2 3/2 3/2 3/2 SW: F Conc ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0	0.26 MN 9/2 10/ 10/ SW8 F Conc ND ND 0.22	1.0 N-2 7/07 1/07 1/07 3310 PP MDL 1.0 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND ND 0.24	1.0 N-2 1/08 -/08 -/08 3310 PP MDL 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene	3/2 3/2 3/2 3/2 SW: F Conc ND ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0	0.26 MN 9/2 10/ 10/ SW8 F Conc ND ND 0.22	1.0 N-2 7/07 1/07 1/07 3310 PP MDL 1.0 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND ND 0.24	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene	3/2 3/2 3/2 3/2 SW: F Conc ND ND 0.081	1.0 N-2 5/07 9/07 9/07 8310 DP MDL 1.0 1.0 1.0	0.26 MN 9/2 10/ 10/ SW3 F Conc ND ND 0.22 ND	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND ND 0.24 ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene	3/2 3/2 3/2 3/2 SW3 F Conc ND ND 0.081	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND 0.22 ND ND	1.0 N-2 7/07 1/07 1/07 3310 PP MDL 1.0 1.0 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND ND 0.24 ND ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene	13 MN 3/2 3/2 3/2 SWi F Conc ND ND 0.081 ND ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND 0.22 ND ND	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0	0.21 MV 1/3: 2/4 SW8 FConc ND ND ND ND ND ND ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene	13 MN 3/2 3/2 3/2 SW8 F Conc ND ND 0.081 ND ND ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0	0.21 MV 1/3 2/4 SW8 F Conc ND ND 0.24 ND ND ND ND ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene	13 MN 3/2 3/2 3/2 SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.21 M/V 1/3: 2/4 SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene	13 MN 3/2 3/2 3/2 SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene	13 MIV 3/2 3/2 3/2 SWI F Conc ND ND ND ND ND ND ND ND ND N	N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluoranthene X Fluorene	13 MN 3/2 3/2 3/2 SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 MN 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Indeno(1,2,3-cd)pyrene	13 MN 3/2 3/2 3/2 SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Indeno(1,2,3-cd)pyrene X 2-Methylnaphthalene	13 MIV 3/2: 3/2: 3/2: SW0: F Conc ND	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Indeno(1,2,3-cd)pyrene X Naphthalene X Naphthalene	13 MIV 3/2: 3/2: 3/2: SW0 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 7/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	MV 4/10 4/11 4/11 SW8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 0/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Indeno(1,2,3-cd)pyrene X Naphthalene X Naphthalene X Phenanthrene	13 MIV 3/2: 3/2: 3/2: SW0 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 7/07 1/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	MV 4/10 4/11 5W8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 V-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
X Lead POLYNUCLEAR AROMATICS (PNAs) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/L) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Indeno(1,2,3-cd)pyrene X Naphthalene X Naphthalene	13 MIV 3/2: 3/2: 3/2: SW0 F Conc ND ND ND ND ND ND ND ND ND N	1.0 N-2 5/07 9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.26 M/V 9/2 10/ 10/ SW8 F Conc ND ND ND ND ND ND ND ND ND N	1.0 7/07 1/07 1/07 1/07 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	0.21 MV 1/3: 2/4 SW8 FConc ND	1.0 N-2 1/08 1/08 1/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	MV 4/10 4/11 5W8 P Conc ND ND ND ND ND ND ND ND ND N	3.0 N-2 D/08 5/08 5/08 3310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0

BGS = Below Ground Surface

N/A = Not Available

* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Peristaltic Pump (PP) MDL = Method Detection Limit A-2

MDL = Method Detection Limit

CLOSURE REPORT (CONTINUED)

APPENDIX A

GROUNDWATER SAMPLING RESULTS (LABORATORY)

FACILITY NAME: Federal-Mogul Corporation

World Headquarters

FACILITY NUMBER: 50005609

Sample ID		BAILL						ar T	SEED ASSESSMENT	ary esperie
Sample Depth (feet BGS)	-+-	MW-3		N	1W-3		MW-3		<u> </u>	
Date Collected		3/25/07					_	+		1W-3
Date Extracted		3/30/07			27/07		1/31/08			10/00
Date Analyzed		3/30/07			/2/07		2/1/08			10/08 14/08
Analytical Method No. Collection Method*		SW8260B			/2/07		2/1/08	-+		14/08
CONSTITUTION Method*	_	PP			8260B		SW8260B			3260B
CONSTITUENT (ug/L) X Benzene	Cor		. 		PP		PP			PP
X Ethylbenzene		ND IVIL	1.0	Conc	MDL	Cor	1C N	1DL	Conc	М
X isopropyibenzene		ND	1.0	ND.	<u> </u>	1.0	ND	1.0	ND	
X 2-Methylnaphthalene		ND	1.0	ND		1.0	ND	1.0	ND	
X Methyl tert-butyl ether		ND	5.0	ND ND		1.0	ND	1.0	ND.	
X Naphthalene		ND	5.0	ND		5.0	ND	5.0	ND	
X n-Propylbenzene		ND	5.0	ND ND			ND	5.0	ND	
X Toluene		ND	1.0	ND			ND	5.0	1.1	
X 1,2,3-Trimethylbenzene			1.0	ND			ND	1.0	ND	
X 1,2,4-Trimethylbenzene			1.0	ND			ND	1.0	ND	
X 1,3,5-Trimethylbenzene			1.0	ND	1.		ND	1.0	ND	
X Xylenes			1.0	ND	1.		ND	1.0	ND	
			3.0	ND	1. 3.		ND	1.0	ND	
METALS				- ;;; }	3.	" "	ND	3.0	ND	
Sample ID								Total Maker	4 sharron	
Sample Depth (feet BGS)		MW-3		MW-	-3		N41A4 3		2	
Date Collected	+					 	MW-3		MW-	3
Date Extracted		/25/07		9/27/0	07	1 1	/31/08	$-\!$		
Date Analyzed		/28/07		10/2/0			2/5/08		4/10/	
Analytical Method No.		28/07		10/2/0			/5/08	$-\!\!\!\!+\!\!\!\!\!-$	4/11/0	
Collection Method*	SW	/6020A		SW602	0A		/6020A		4/11/0	
CONSTITUENT (ug/L)	-	PP		PP		 	PP		SW602	DA
X Lead	Conc	MDL	Conc	M	DL	Conc	MDL		PP	
	NI	1.	이	ND	1.0			Conc		
POLYNUCLEAR AROMATICS (PNAs)							 	2.0	ND	3
Sample D		W-3								(Proposition of
Sample Depth (feet BGS) Date Collected	- 101	VV-3	 	MW-3			IW-3	1720.665	MW-3	
Date Extracted	3/2	25/07	┼						10100-3	
Date Analyzed		9/07		9/27/07		1/3	31/08		4/10/08	
Analytical Method No.		9/07		10/1/07			4/08	1	4/15/08	
Collection Method*		8310		10/1/07		2/4	4/08		4/15/08	
CONSTITUENT (ug/L)		P	 `	W8310		SW	8310		SW8310	
(Acenaphthene	Conc	MDL	Conc	PP			РР		PP	
Acenaphthylene	ND			VD N	MDL	Conc	MDL	Cor		MDL
Anthracene	ND	1.0		VD.	1.2	ND	1.	0	ND	1.1
Benzo(a)anthracene	ND	1.0		ND O	1.2	ND	1.0		ND	1.1
Benzo(a)pyrene	ND	1.0		iD	1.2	ND	1.0		ND	1.1
Benzo(b)fluoranthene	ND	1.0		D	1.2	ND ND	1.0		ND	1.1
Benzo(g,h,i)perylene	ND	1.0		D	1.2	ND	1.0		ND	1.1
Benzo(k)fluoranthene	ND	1.0		D	1.2	ND ND	1.0	 	ND	1.1
Chrysene	ND	1.0	N		1.2	ND ND	1.0	+	ND	1.1
Dibenzo(a,h)anthracene	ND	1.0	N		1.2	ND	1.0		ND	1.1
Fluoranthene	ND	1.0	N		1.2	ND	1.0	 	ND	1.1
Fluorene	ND	1.0	N	D	1.2	ND	1.0		ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.0	N		1.2	ND	1.0		ND	1.1
2-Methylnaphthalene	ND	1.0	NI)	1.2	ND	1.0	· '	ND	1.1
Naphthalene	ND	1.0	N)	1.2	ND	1.0		ND	1.1
Phenanthrene	ND	1.0	NE		1.2	ND	1.0 1.0		ND	1.1
. Heriandirelle						וטויי	1 121	•	NDI	1.1
Pyrene	ND	1.0	NE)	1.2	ND				
Pyrene Below Ground Surface	ND ND	1.0	NC NC		1.2	ND ND	1.0	1	VD VD	1.1

¹⁹⁷A = NOL Available

* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Peristaltic Pump (PP)

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CLOSURE REPORT (CONTINUED)

APPENDIX A

GROUNDWATER SAMPLING RESULTS (LABORATORY)

FACILITY NAME: Federal-Mogul Corporation

World Headquarters

FACILITY NUMBER: 50005609

Sample ID		NANA/ 4						
Sample Depth (feet BGS)		MW-4		MW-4		MW-4	N	1W-4
Date Collected		2/25/07						
Date Extracted		3/25/07		9/27/07	1	/31/08	4/:	10/08
Date Analyzed		3/30/07		LO/3/07		2/1/08		14/08
Analytical Method No.		3/30/07		10/3/07		2/1/08		14/08
Collection Method*	- + 3	W8260B	S	W8260B	SI	V8260B		8260B
CONSTITUENT (ug/L)	Conc	PP		PP		PP		PP
X Benzene			Conc		Conc	MDL	Conc	MD
X Ethylbenzene					۱ 0.	D 1	.0 ND	
X Isopropylbenzene					۸ 0.	D 1	.0 ND	
X 2-Methylnaphthalene		VD 1				D 1	.0 ND	
X Methyl tert-butyl ether		ID 5.			.0 N	D 5.	.0 ND	
X Naphthalene					.0 N	D 5.	.0 ND	
X n-Propylbenzene					.0 N	D 5.	.0 ND	
X Toluene	N N			D 1.		D 1.	.0 ND	
X 1,2,3-Trimethylbenzene				D 1.		D 1.	0 ND	
X 1,2,4-Trimethylbenzene	N N			D 1.			0 ND	
X 1,3,5-Trimethylbenzene	N N						0 ND	
X Xylenes	N						0 ND	
		3.1	N N	D 3.	0 NI	3.0	O ND	
METALS	10 TO 10				NAMES OF THE OWNER, WHITE OF			
Sample ID		1W-4						
ample Depth (feet BGS)		100-4	- N	1W-4	M	W-4	MW	/-4
Date Collected	3/	25/07	ļ					
Pate Extracted		28/07		27/07		1/08	4/10	/08
ate Analyzed		28/07		/2/07		5/08	4/11	/08
nalytical Method No.		6020A		/2/07		5/08	4/11,	/08
ollection Method*		PP		6020A		60 20A	SW60	20A
ONSTITUENT (ug/L)	Conc	MDL	Conc	PP Taabi		ор	PF	
(Lead	6.0	+	1.4	MDL 1.0	Conc	MDL		MDL
				1.0	ND	1.0	4.1	3
OLYNUCLEAR AROMATICS (PNAs)				<u> </u>				1302 TB 97VAT
ample ID	M'	W-4		W-4	N/1	N-4		
ample Depth (feet BGS) ate Collected					1011	70-4	MW-	-4
						1/00		
	3/2	5/07	9/2	7/07	1/2			08
ate Extracted		5/07 9/07		7/07 1/07	1/3		4/10/	
ate Extracted ate Analyzed	3/2		10/	1/07	2/4	/08	4/15/	
ate Extracted ate Analyzed nalytical Method No.	3/2	9/07	10/ 10/	1/07 1/07	2/4 2/4	/08 /08	4/15/ 4/15/	08
ate Extracted ate Analyzed nalytical Method No. bllection Method*	3/2 3/2 SW8	9/07 9/07	10/ 10/ SW	1/07	2/4 2/4 SW8	/08 /08 310	4/15/ 4/15/ SW83	08
ate Extracted ate Analyzed nalytical Method No. bllection Method* DNSTITUENT (ug/L)	3/2 3/2 SW8	9/07 9/07 8310	10/ 10/ SW	1/07 1/07 8310 P	2/4 2/4 SW8 P	/08 /08 /310 P	4/15/ 4/15/ SW83 PP	08 10
ate Extracted ate Analyzed halytical Method No. halytican Method* DNSTITUENT (ug/L) Acenaphthene	3/2: 3/2: SW8	9/07 9/07 8310 PP MDL	10/ 10/ SW8	1/07 1/07 8310 PP MDL	2/4 2/4 SW8 P Conc	/08 /08 /310 P MDL	4/15/ 4/15/ SW83 PP Conc	08 10 MDL
ate Extracted ate Analyzed halytical Method No. halytican Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL	10/ 10/ SW3 F Conc	1/07 1/07 8310 PP MDL	2/4 2/4 SW8 P Conc	/08 /08 /310 P MDL 1.0	4/15/ 4/15/ SW83 PP Conc ND	08 10 MDL 1.
ate Extracted ate Analyzed halytical Method No. helection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene	3/2: 3/2: SW8 P Conc ND ND	9/07 9/07 8310 PP MDL 1.0	10/ 10/ SW3 F Conc	1/07 1/07 8310 PP MDL 1.1	2/4 2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0	4/15/ 4/15/ SW83 PP Conc ND	08 10 MDL 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	3/2: 3/2: SW8 P Conc ND ND	9/07 9/07 8310 PP MDL 1.0	10/ 10/ SW: F Conc ND	1/07 1/07 8310 PP MDL 1.1 1.1	2/4 2/4 SW8 P Conc ND ND	/08 /08 /310 P MDL 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND ND	08 10 MDL 1.: 1.:
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene	3/2: 3/2: SW8 P Conc ND ND ND	9/07 9/07 8310 PP MDL 1.0 1.0	10/ 10/ SW: F Conc ND ND	1/07 1/07 8310 PP MDL 1.1	2/4 2/4 SW8 P Conc ND ND ND ND	/08 /08 /310 P MDL 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND ND	08 10 MDL 1. 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene	3/2: 3/2: SW8 P Conc ND ND ND ND ND ND ND ND ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0	10/ 10/ SW8 F Conc ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND ND ND	08 10 MDL 1. 1. 1. 1. 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW3 F Conc ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND ND ND ND ND ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1 1 1 1
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(k)fluoranthene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: F Conc ND ND ND ND	1/07 1/07 1/07 8310 PP MDL 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND ND ND ND ND ND ND ND ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1 1 1 1 1 1 1
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: F Conc ND ND ND ND ND	1/07 1/07 1/07 8310 PP MDL 1.1 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1 1 1 1 1 1 1 1 1 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1 1 1 1 1 1 1 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1 1 1 1 1 1 1 1 1 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND ND	1/07 1/07 1/07 8310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ SW83 PP Conc ND	MDL 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	2/4 2/4 SW8 P Conc ND	/08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ 5W83 PP Conc ND	MDL 1 1 1 1 1 1 1 1 1 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	2/4 SW8 P Conc ND	/08 /08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ 5W83 PP Conc ND	MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND ND ND	1/07 1/07 1/07 8310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	2/4 SW8 P Conc ND	/08 /08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ 5W83 PP Conc ND	MDL 1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.
ate Extracted ate Analyzed halytical Method No. bllection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene	3/2: 3/2: SW8 P Conc ND	9/07 9/07 8310 PP MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	10/ 10/ SW: FConc ND ND ND ND ND ND ND ND ND ND ND	1/07 1/07 3310 PP MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	2/4 2/4 SW8 P Conc ND	/08 /08 /08 /310 P MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4/15/ 4/15/ 5W83 PP Conc ND	MDL 1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.

BGS = Below Ground Surface

N/A = Not Available

^{**}Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Peristaltic Pump (PP) MDL = Method Detection Limit

A-4

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION REDEVELOPMENT DIVISION

CLOSURE REPORT (CONTINUED)

APPENDIX A

GROUNDWATER SAMPLING RESULTS (LABORATORY)

FACILITY NAME: Federal-Mogul Corporation

World Headquarters

FACILITY NUMBER: 50005609

Sample ID						\$ - 1980.	NEW TOR	390 J 379 F
Sample Depth (feet BGS)	CA	TCH BASIN	CA	TCH BASIN		TCH BASIN		
Date Collected					CA	CH BASIN	CA1	CH BASI
Date Extracted		3/25/07		9/27/07		/31/08		
Date Analyzed		3/30/07		10/2/07		2/1/08		/10/08
Analytical Method No.		3/30/07		10/2/07				/14/08
Collection Method*	S	W8260B		W8260B		2/1/08		/14/08
CONSTITUENT (ug/L)		GS		PP	- 31	N8260B PP	Sv	V8260B
X Benzene	Conc	MDL	Conc		Conc			PP
X Ethylbenzene		ND 1				MDL		M
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1							D
X Isopropylbenzene	1						1.0 N	D
X 2-Methylnaphthalene	1						1.0 N	D
X Methyl tert-butyl ether			 -				5.0 N	D
X Naphthalene	1		.0 0.8		.0 N		5.0 NI	D
X n-Propylbenzene		ID 1			0 N		i.0 NI	D
X Toluene		ID 1.		ID 1.			.0 NI	
X 1,2,3-Trimethylbenzene				ID 1.			.0 NI	
X 1,2,4-Trimethylbenzene				D 1.		D 1	.0 NC	5
X 1,3,5-Trimethylbenzene						1	.0 NE	<u></u>
X Xylenes		D 1.		D 1.		1	.0 NE	
	N	D 3.	0 N	D 3.) NI		.0 NC	+
WETALS			NO PRISONNESSA AND AND AND AND AND AND AND AND AND AN					\
Sample ID	-							
Sample Depth (feet BGS)	CATC	H BASIN	CATO	H BASIN	CATC	H BASIN	CATCI	I BASIN
Date Collected	+						CATC	BASIN
Date Extracted		25/07	9/	27/07	1/3	1/08	1/1	0/08
Date Analyzed		28/07	10	/2/07		5/08		
Analytical Method No.	3/2	28/07	10	/2/07		5/08		1/08
Collection Method*	SW	6020A		6020A		020A		1/08
CONSTITUENT (ug/L)		GS		PP		PP		020A
K Lead	Conc	MDL	Conc	MDL	Conc			Р
CCCau	ND	1.0	NC			MDL		MDL
OLYNUCLEAR AROMATICS (PNAs)	<u> </u>			1.0	ND	1.0) ND	!
ample ID						C. F. C. C.		3552
ample Depth (feet BGS)	STORM	1 SEWER	CATC	I BASIN	CATCU	DAGUA		
			5.(10.	IBASIN	CATCH	BASIN	STORM	SEWER
ate Collected	3/2	5/07	0/2	7/07				
ate Extracted		9/07		1/07	1/31		4/10	
ate Analyzed		9/07			2/4		4/15	/08
nalytical Method No.		8310		1/07	2/4		4/15	/08
, and the	1 51//3			(410 1	SWA	310	SW8	310
ollection Method*			SW8					
ollection Method* ONSTITUENT (ug/L)	G	SS	P	Р	P		PF	,
ollection Method* ONSTITUENT (ug/L)	Conc C	S MDL	P Conc			MDL		
ollection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene	Conc ND	MDL 1.0	Conc ND	Р	P.		Conc PF	MDL
ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene	Conc ND ND	MDL 1.0 1.0	Conc ND ND	P MDL	Conc	MDL	Conc ND	MDL 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	Conc ND ND ND	MDL 1.0 1.0 1.0	Conc ND ND 0.34	P MDL 1.1	Conc 21	MDL 1.0	Conc ND ND	MDL 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	Conc ND ND ND	MDL 1.0 1.0 1.0 1.0	Conc ND ND	MDL 1.1 1.1	Conc 21	MDL 1.0 1.0 5.2	Conc ND ND ND	MDL 1 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene	Conc ND ND ND ND 0.14	MDL 1.0 1.0 1.0 1.0 1.0 1.0	Conc ND ND 0.34	MDL 1.1 1.1 1.1	Conc 21 ND 4.7	MDL 1.0 1.0 5.2 5.2	Conc ND ND ND ND ND	MDL 1 1 1 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	Conc ND ND ND O.14 0.18	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Conc ND ND O.34 ND	P MDL 1.1 1.1 1.1 1.1	P Conc 21 ND 4.7 20 23	MDL 1.0 1.0 5.2 5.2 5.2	Conc ND ND ND ND ND ND ND	MDL 1 1 1 1 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	Conc ND ND ND 0.14 0.18 0.14	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Conc ND ND 0.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1	P Conc 21 ND 4.7 20 23 27	MDL 1.0 1.0 5.2 5.2 5.2 5.2	Conc ND ND ND ND ND ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	Conc ND ND ND 0.14 0.18 0.14 ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1	P Conc 21 ND 4.7 20 23 27 22	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2	Conc ND ND ND ND ND ND ND ND ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Dilection Method* DNSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	Conc ND ND ND 0.14 0.18 0.14	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND ND ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	P Conc 21 ND 4.7 20 23 27 22 12	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene	Conc ND ND ND 0.14 0.18 0.14 ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND ND ND ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene	Conc ND ND ND 0.14 0.18 0.14 ND ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND ND ND ND ND ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	Conc 21 ND 4.7 20 23 27 22 12 23 23 23	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 1.0	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	Conc ND ND ND 0.14 0.18 0.14 ND ND 0.19	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 23 54	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene	Conc ND ND ND 0.14 0.18 0.14 ND ND 0.19	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 54 0.82	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 1.0 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene	Conc ND ND ND 0.14 0.18 0.14 ND ND 0.19 ND 0.19	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND O.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 54 0.82 24	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 1.0 5.2 1.0 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene	Conc ND ND ND 0.14 0.18 0.14 ND ND 0.19 ND 0.19 ND 0.26 ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND O.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 54 0.82 24 ND	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 1.0 5.2	Conc ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene Phenanthrene	Conc ND ND ND 0.14 0.18 0.14 ND ND ND ND 0.19 ND 1.1 ND 0.26 ND ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND 0.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 54 0.82 24 ND ND ND	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 5.2 1.0 5.2 1.0 5.2	CONC ND	MDL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ollection Method* ONSTITUENT (ug/L) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 2-Methylnaphthalene Naphthalene	Conc ND ND ND 0.14 0.18 0.14 ND ND 0.19 ND 0.19 ND 0.26 ND	MDL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	P Conc ND ND O.34 ND	P MDL 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.	Conc 21 ND 4.7 20 23 27 22 12 23 23 54 0.82 24 ND	MDL 1.0 1.0 5.2 5.2 5.2 5.2 5.2 5.2 1.0 5.2 1.0 5.2 1.0	CONC ND	

N/A = Not Available

^{**}Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Peristaltic Pump (PP) MDL = Method Detection Limit

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CLOSURE REPORT (CONTINUED)

APPENDIX C
COMPARISON TABLE FOR GROUNDWATER
FACILITY NAME: Federal-Mogul World Headquarters
FACILITY NUMBER: 50005609

1	Number	Range of Detected	Maximum	Applicable RBSL Criterion (Criterion (January 2006)
Contaminant	으 -	Concentrations	Detected	Residential & Commercial	nercial I
	Samples	[Min-Max]		Drinking Water Criteria	riteria
		(a) (ga)	(u8/ r/	(ug/L)	
VOLATILES				wesing (1811)	PASS OF FAIL
Benzene {I}	5	1.1	1.1	л	DACC
Ethylbenzene {I}	5	2.2 - 7.0	7.0	74	PASS
Isopropylbenzene	5	1.3	1.3	800	PASS
2-Methylnaphthalene	5	20	20	090	BASS
MTBE	5	nd	0.0	40	PASS
Naphthalene	5	1.1 - 69	69	005	DASS
Propylbenzene	5	3.5	3.5	0.8	PASS
Toluene {I}	ъ	2.2 - 9.0	9.0	790	PASS
1,2,3-Trimethylbenzene	5	6.8	6.8	na	PASS
1,2,4-Trimethylbenzene {I}	5	28	28	63	PASS
1,3,5-Trimethylbenzene {I}	5	8.7	8.7	72	PASS
Xylenes	5	13 - 42	42	280	PASS
Accompatible (FNAS)					
Accomplete	, ,	31	31	1,300	PASS
Accimplification	U	nd	0.0	52	PASS
Anthracene	5	2.7	0.0	43	PASS
Benzo(a)anthracene	5	0.15	0.15	2	PASS
Benzo(a)pyrene	5	0.32	0.32	5	PASS
Benzo(b)fluoranthene	5	0.48	0.48	2	PASS
Benzo(g,n,i)perylene	5	nd	0.0	1	PASS
Benzo(k)fluoranthene	5	nd.	0.0	1	PASS
Chrysene	5	0.33	0.33	2	PASS
Dibenzo(a,h)anthracene	5	nd	0.0	2	PASS
Huorantnene	5	6.8	6.8	210	PASS
Huorene	5	5.6	5.6	880	PASS
indeno(1,2,3-cd)pyrene	5	0.26	0.26	2	PASS
2-Wetnylnaphthalene	5	16	16	260	PASS
Naphthalene	5	130	130	520	PASS
Pilendrithrene	5	1.3	1.3	52	PASS
1 Helic	Į,	С	0.0	140	PASS
METALS					
Lead (B)	5	0.43 - 4.1	41	2	
				+	TAIL

APPENDIX C
COMPARISON TABLE FOR GROUNDWATER
FACILITY NAME: Federal-Mogul World Headquarters
FACILITY NUMBER: 50005609

	Number	Range of Detected	Maximum	200	
Contaminant	of	Concentrations	Detected	Applicable RBSL Criterion (January 2006) Groundwater Surface	(January 2006)
	Samples	[Min-Max]	(m. /r)	Water Criteria	8
		ç	(20/2/	(Tier I)	7.00
VOLATILES				(1611)	PASS OF FAIL
Benzene {I}	5	1.1	1.1	200	DACC
Ethylbenzene {I}	5	2.2 - 7.0	7.0	18	DASS
Isopropylbenzene	5	1.3	1.3	5	PACC
2-Methylnaphthalene	5	20	20	5 .	DACC
MTBE	5	nd	0.0	730	DACC
Naphthalene	5	1.1 - 69	69	13	FASS
Propylbenzene	5	3.5	3.5	5 6	DASC
Toluene {I}	5	2.2 - 9.0	9.0	140	PASS
1,2,3-Trimethylbenzene	5	6.8	6.8	na	PASS
1,2,4-Trimethylbenzene {I}	5	28	28	17	TAN S
1,3,5-Trimethylbenzene {I}	5	8.7	8.7	45	PASS
Xylenes	5	13 - 42	42	35	FAIL
POLYNI CLEAR AROMATICS (BNAS)					
Acenaphthene	5	21	21		
Acenaphthylene	5	nd	0.0	5 6	7
Anthracene	5	2.7	0.0	5 6	PASS
Benzo(a)anthracene	5	0.15	0.15	5 5	PASS
Benzo(a)pyrene	5	0.32	0.32	5 6	PASS
Benzo(b)fluoranthene	5	0.48	0.48	5 0	PACC
Benzo(g,h,i)perylene	5	nd	0.0	NA S	DACC
Benzo(k)fluoranthene	5	nd	0.0	NA	PASS
Chrysene	5	0.33	0.33	Ī.	DASS
Dibenzo(a,h)anthracene	5	nd	0.0	ID	DACC
Fluoranthene	5	6.8	6.8	2	
Fluorene	5	5.6	5.6	12	DACC
Indeno(1,2,3-cd)pyrene	ر د	0.26	0.26	ID.	DASS
2-Methylnaphthalene	5	16	16	5	DASS
Naphthalene	5	130	130	12 6	FASS
Phenanthrene	5	1.3	1.3	2	DACC
Pyrene	5	0	0.0	ID	PASS
METALS					
Lead {B}	5	0.43 - 4.1	» 1		
			1:1	14	PASS

APPENDIX C
COMPARISON TABLE FOR GROUNDWATER
FACILITY NAME: Federal-Mogul World Headquarters
FACILITY NUMBER: 50005609

Number	Range of Detected	Maximum	Applicable BBCI Critorio /	3000
of.	Concentrations	Detected	Groundwater Volatilian	anuary 2006)
Samples	[Min-Max]		Indoor Air Inhalation (Criteria
- ancin	(ug/L)	(1/gu)	(ug/L)	
			Residential (Tier I)	PASS or FAIL
5	1.1	1	1000	
5	2.2 - 7.0	70	3,800	PASS
5	1.3	1 2 6	110,000	PASS
5	90	30.5	000,65	PASS
5	nd o	0.0	ID	PASS
5	1.1 - 69	60	47,000,000	PASS
5	3.5	3,5	31,000	PASS
5	2.2 - 9.0	90	50.00	PASS
5	6.8	8.5	000/085	PASS
2	28	28	na	PASS
5	8.7	8.7	61 000	PASS
5	13 - 42	42	190,000	PASS
				rASS
ļ 				
	31	31	4,200	PASS
U	nd	0.0	3,900	PASS
5	2.7	0.0	43	PASS
5	0.15	0.15	NLV	PASS
5	0.32	0.32	NIV	DASS
5	0.48	0.48	ō	DASS
5	P.	0.0	NIC	DACC
5	nd	0.0	NLV	PASS
5	0.33	0.33	Ġ	PASS
G	nd	0.0	NLV	PASS
5	6.8	6.8	210	PASS
5	5.6	5.6	2,000	PASS
5	0.26	0.26	NLV	PASS
	16	16	ID	PASS
5	130	130	31,000	PASS
1 0	1.3	1.3	1,000	PASS
J.	0	0.0	140	PASS
5	0.43 - 41	4		
		7.1	NLV	PASS
	Samples Taken Taken 5 5 5 5 5 5 5 5 5 5 5 5 5	C Pan	Range of Detected Concentrations (ug/L) (1.1 1.1 1.1 2.2-7.0 1.3 20 nd 1.1-69 3.5 2.2-9.0 6.8 28 8.7 13-42 13-42 0.48 nd nd nd nd nd nd 6.8 5.6 0.26 0.26 0.26 0.26 0.26 13.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.	Range of Detected (Maximum (Maximum (Min-Max)) Applicable (Ground (ug/L)) Applicable (ug/L) Applicable (ug/L)

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

APPENDIX C
COMPARISON TABLE FOR GROUNDWATER
FACILITY NAME: Federal-Mogul World Headquarters
FACILITY NUMBER: 50005609

-	Number	Range of Detected	Maximum		
Contaminant	읔	Concentrations	Detected	Applicable RBSL Criterion (J	Criterion (January 2006)
	Samples	[Min-Max]		Criteria	
	laken	(ug/L)	(ug/L)	(ug/L)	
VOLATILES				(Tier I)	PASS or FAIL
Benzene {I}	7	3			
Ethylbenzene { }	7	73 70	1.1	11,000	PASS
sopropy benzene	٠, ر	2.7 - 7.0	7.0	170,000	PASS
2-Methylnanhthalana	, 0	1.3	1.3	56,000	PASS
MTRE	ı	20	20	25,000	PASS
North-bolomo	U	nd	0.0	610,000	PASS
Naphthaiene	5	1.1 - 69	69	31,000	DACC
Propylbenzene	5	3.5	3.5	15 000	PASS
Toluene (I)	5	2.2 - 9.0	9.0	E30 000	PASS
1,2,3-Trimethylbenzene	5	6.8	6.8	330,000	PASS
1,2,4-Trimethylbenzene {I}	5	28	28	26,000	PASS
1,3,5-Irimethylbenzene {I}	5	8.7	8.7	61 000	PASS
Aylenes	5	13 - 42	42	190,000	DACC
POLYNUCIEAR AROMATICS (PNAS)					. 100
Acenaphthene	7	21			
Acenaphthylene	5	nd		4,200	PASS
Anthracene	5	2.7		3,900	PASS
Benzo(a)anthracene	5	0.15	0.15	43	PASS
Benzo(a)pyrene	5	0.32	0.23		PASS
Benzo(b)fluoranthene	5	0.48	0.48)	PASS
Benzo(g,h,i)perylene	5	nd	0.0	1	PASS
Benzo(k)fluoranthene	5	nd	0.0	-	PASS
Chrysene	5	0.33	0.33	2	PASS
Dibenzo(a,h)anthracene	5	nd	0.0	2	PASS
Fluoranthene	5	6.8	6.8	210	PASS
Fluorene	5	5.6	5.6	2,000	PASS
Indeno(1,2,3-cd)pyrene	5	0.26	0.26	2,000	PASS
2-Methylnaphthalene	5	16	16	2	PASS
Naphthalene	5	130	130	23,000	PASS
Phenanthrene	5	1.3	13	31,000	PASS
Pyrene	5	0	00 15	1,000	PASS
		,	0.0	140	PASS
METALS					
Lead (B)	5	0.43 - 4.1	4.1	5	
					PASS

Blue text indicates "J" qualifiers. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL).

FACILITY NAME: Federal-Mogul World Headquarters **APPENDIX D**CHRONLOGICAL SUMMARY OF THE RESULTS FACILITY NUMBER: 50005609

C.	Chemical	Residential	GSI Part	Part 201 Criteria (January 2006) Residential Industri	Industrial	Groundwater	MW-1	MW-1	MW-1	MW-1	MW-2	MW-2	MW-2	MW-2	M\M_2
Ch	hemical	Residential	GSI	Residential	Industrial	Groundwater	MW-1	MW-1	MW-1	MW-1	Z-W.Z	7.VM	MW-2	Z-/2	2.4
			_				_	_	-	_	7-44141		-	1	14141
	Abstract	Drinking	Criteria	Indoor Air	Indoor Air	Contact									
Sei	Service #	Water		Inhalation	Inhalation		3/25/07	9/27/07	1/31/08	4/10/08	3/25/07	9/27/07	1/31/08	4/10/08	3/25/07 9/2
VOC, ug/I - Method 8021A		The second second second													
Benzene	71432	5.0	200	5,600	35,000	11,000	œ.5	1.3	1.7	1.1			nd 	nd.	
Ethylbenzene	100414	74	18	110,000	170,000	170,000	20	6.0	7.0	7.0	5.7		nd.	2.2 r	
Isopropyi benzene	98828	800	ō	56,000	56,000	56,000	3.6	1.1	1.3	1.3	굨				
2-Methylnaphthalene	91576	260	ō	ō	ō	25,000	41	28	25	20	<u>-</u>			nd r	nd nd
Methyl-tert-butyl ether (MTBE)	1634044	40	730	47,000,000	47,000,000	610,000	nd	nd	ъ	nd	nd	nd	nd		nd
Naphthalene	91203	520	13	31,000	31,000	31,000	160	90	79	69	11	3.0	2.3	9.7	
n-Propylbenzene	103651	80	ō	ō	ō	15,000	8.9	2.9	3.4		J.			nd T	
Toluene	108883	790	140	530,000	530,000	530,000	74	7.9	14	9.0	5.0	nd		2.2	
1,2,3-Trimethylbenzene	526738	NA A	N N	NA	NA	NA	25	6.6	7.6	6.8			nd.		nd
1,2,4-Trimethylbenzene	95636	63	17	56,000	56,000	56,000	97	25	30	28	0.6				
1,3,5-Trimethylbenzene	108678	72	45	61,000	61,000	61,000		7.5	9.3	8.7		ρđ		nd .	nd .
Xylenes	1330207	280	35	190,000	190,000	190,000	160	33	47	42	42		nd ——	13	
PAH, ug/l - Method 8270															
Acenaphthene	83329	1,300	8	4,200	4,200	4,200	19	19	21	31	<u>a</u>				
Acenaphthylene	208968	52	5	3,900	3,900	3,900	nd	3.8		nd	<u>a</u>	nd.	DG.	nd r	nd nd
Anthracene	120127	43	₽	43	43	43	1.9	2.9	3.2	2.7	0.081	0.22	0.24		
Benzo(a)anthracene	56553	2.1	ē	NLV	NLV	9.4	0.34	0.29	0.85					nd -	
Benzo(a)pyrene	50328	5.0	₽	NLV	NLV	1.0		nd	0.90	0.32	nd	nd	nd		
Benzo(b)fluoranthene	205992	1.5	-	ō	ō	1.5	nd	nd	1.1					nd	
Benzo(g,h,i)perylene	191242	1.0	N A	NLV	NLV	1.0	nd	nd							
Benzo(k)fluoranthene	207089	1.0	N A	NLV	NLV	1.0	nd	В		nd					
Chrysene	218019	1.6	5	ō	ō	1.6	0.19	0.33	1.1	0.33			nd		
Dibenzo(a,h)anthracene	53703	2.0	ō	NLV	NLV	2.0	nd	nd	1.6						
Fluoranthene	206440	210	1.6	210	210	210	44		7.4	6.8	0.49	0.65			
Fluorene	86737	880	12	2,000	2,000	2,000	4.3	5.4	6.2	5.6					
Indeno(1,2,3-cd)pyrene	193395	2.0	ō	NLV	NLV	2.0	nd	nd	1.2		nd				
2-Methylnaphthalene	91576	260	ō	ō	₽	25,000	49	40	24	16	1.3	nd			
Naphthalene	91203	520	13	31,000	31,000	31,000	120	170	130	200					nd _
Phenanthrene	85018	52	2.4	1,000	1,000	1,000	16	24	23	1.1.10	0.66	1.8	1.9	nd.	<u>т</u>
Pyrene	129000	140	ō	140	140	140	2.1	nd	1.8	1.3	nd	nd	nd		nd
Total Metals, ug/l	7430031)	:			5	3		,	,	P				
Lead	7439921	7439921 4.0	14	NLV	NLV	Đ	0.23	0.85	2.9	0.43	13	0.26	0.21	br	nd

REMEDIATION REDEVELOPMENT DIVISION

CLOSURE REPORT (CONTINUED)

	Chemical	Number	Range of Detected			
Contaminant	Abstract Number	of	Concentrations	Detected	Applicable RBSL Criterion (January 2006) Groundwater Protection	(January 2006)
	(CAS)	Taken	(ug/kg)	(uo/ka)	Drinking Water Protection Criteria	tion Criteria
VOC, ug/kg - Metho d 8021A				Q.	Residential (Tient)	
Benzene (I)	7, 12,				resideficial (Her I)	PASS or FAIL
Ethylbenzene (I)	100414	, ,	ND		100	
Isopropyi benzene	00000 414001	,	42	42	1 500	PASS
2-Methylnaphthalene	91576	<u>-</u>	ND	,	91,000	PASS
Methyl-tert-butyl ether (MTBE)	1634044	٠ ١	ND		57,000	PASS
Naphthalene	91703	<u>-</u>	ND		800	PASS
n-Propylbenzene (I)	103651	٠ ١	ND	,	35 000	PASS
Toluene (I)	100001	<u>. </u> -	ND		1 600	PASS
1,2,3-Trimethylbenzene	526739	<u>.</u>	200	200	16,000	PASS
1,2,4-Trimethylbenzene (I)	95636	٠,	NO		na na	PASS
1,3,5-Trimethylbenzene (I)	108678		200		2,100	PASS
Xylenes (I)	1330207	<u> </u>	200		1,800	PASS
				2002	5,600	PASS
PAH, ug/kg - Method 8270						
Acenaphinene	83329	1	ND CN			
Anthropping	208968	1	ND		300,000	PASS
Renzo(a)anthrase	120127	1	ND		5,900	PASS
Ponto(a)antill acerie	56553	1	ND		41,000	PASS
Benzo(a)pyrene	50328	12	N	 -	NLL	PASS
nenzo(p)iiuorantnene	205992	1	5	-	NLL	PASS
Benzo(g,n,i)perylene	191242	1	ND S		NLL	PASS
Character	207089	ь	ND		NLL	PASS
Dihenzo(a h)anth-	218019	1	ND		NLL	PASS
Elioranthono	53703	1	ND		NLL	PASS
Fluorene	206440	1	ND		NLL	PASS
Indeno(1 2 a cd)	86737	1	B		730,000	PAISS
2-Methylpanhthalana	193395	1	ND		390,000	PASS
Nanhthalana	91576	Ъ	S		NLL	PASS
Phenanthrene	91203	1	N	.	980	PASS
Pyrene	85018	1	ND		41,000	PASS
	129000	1	ND	-	55,000	PASS
Metals, ug/kg - Method 6020					+00,000	PASS
Lead	7439921		3 900			
			.,		200 005	

MICHIGAN DETARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION REDEVELOPMENT DIVISION
CLOSURE REPORT (CONTINUED)

	Chemical	Number	Range of Detected	Maximum	Applicable RBSL Criterion (January 2006)	lanuary 2006)
Contaminant	Abstract		Concentrations	Detected	Groundwater Protection	ection
	(CAS)	Samples	[Min-Max]		Groundwater Surface Water Interface Criteria	nterface Criteria
	(0.0)	igneri	(%/ \gu)	(ug/kg)	(ug/kg)	
VOC, ug/kg - Method 8021A					Residential (Tier I)	PASS or FAIL
Benzene (I)	71/22	4	2			
Ethylhenzene (I)	100414	,	NO		4,000 (X)	PASS
Isonronyl henzene	5C660	٠	42	42	360	PASS
2-Methylpaphthalana	90020	-	NO		ĪD	PASS
Mothy test hit dether (MTDC)	9/5T6	1	ND	•	ID	PASS
Nashthalan	1634044	1	ND	•	15,000 (X)	PASS
Napricialene	91203	1	ND		870	PASS
n-Propylbenzene (I)	103651	1	ND	,	NA	DACC
Toluene (I)	108883	1	200	200	2 800	PASS
1,2,3-Trimethylbenzene	526738	1	ND	-	n3	PASS
1,2,4-Trimethylbenzene (I)	95636	1	ND	•	0.63	PASS
1,3,5-Trimethylbenzene (I)	108678	1	ND	1	1 100	PASS
Xylenes (I)	1330207	1	200	200	700	PASS
Access Left						
Acenaphinene	83329	1	ND		4,400	PACC
Acenaphtnylene	208968	1	ND		5	2000
Anthracene	120127	1	ND		5 6	PASS
Benzo(a)anthracene	56553	1	ND		2 0	PASS
Benzo(a)pyrene	50328	1	ND		7II -	PASS
Benzo(b)fluoranthene	205992	1	ND		N	PASS
Benzo(g,h,i)perylene	191242	1	ND	-	2	FASS
Benzo(k)fluoranthene	207089	1	ND		ZI C	PASS
Chrysene	218019	1	ND	-	2	PASS
Dibenzo(a,h)anthracene	53703	1	ND	-	21.	PASS
Fluoranthene	206440	1	ND	-	2 200	PASS
Fluorene	86737	Н	ND		5 300	PASS
indeno(1,2,3-cd)pyrene	193395	Ľ	ND	-	NII	PASS
2-Wetnyinaphthaiene	91576	1	ND	,	5	DACC
Naphthalene	91203		ND	,	5 5	DASS
Pnenanthrene	85018	P	ND	-	5 300	PACC
rylelle	129000	H	NB		Œ	PASS
Metals 110/kg - Method 5070						
Lead	7/30071	<u>-</u>	3 300			
		-	3,500	3,900	2.464.000	2000

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

	Chemical	Number	Range of Detected	Maxim		
Contaminant	Abstract	of	Concentrations	Detected	Applicable RBSL Criterion (January 2006) Groundwater Protection	(January 2006)
	(CAS)	Taken	(ug/kg)	(110/1/2)	Groundwater Contact Protection Criteria	tection Criteria
VOC 118/kg - Mathod Sonn				9	Rocidontia (T.)	
Benzene (I)					nesidential (Her I)	PASS or FAIL
Ethylhenzene (I)	71432	1	ND		220,000	
sopropyl henzene	100414	1	42	42	140.000	PASS
2-Methylnaphthalene	87886	1	ND		390,000	PASS
Methyl-tert-butylether (MTRF)	9/5T6	1	ND	-	5 500,000	PASS
Naphthalene (1634044	-	ND		5,550,500	PASS
n-Propvibenzene (I)	91203		ND		2 100 000	PASS
Toluene (I)	103651	١	ND		300,000	PASS
1,2,3-Trimethylbenzene	576750	,	200	200	250,000	PASS
1,2,4-Trimethylbenzene (I)	95636	<u>.</u>	S C		na	PASS
1,3,5-Trimethylbenzene (I)	108678	- -	3		110,000	PASS
Xylenes (I)	1330207		300		94,000	PASS
			200	200	150,000	PASS
PAH, ug/kg - Metho d 8270						
Acenaphthene	83329	₽	25			
Acenaphtnylene	208968	₽	ND I		970,000	PASS
Anthracene	120127	Þ	ND		440,000	PASS
Benzo(a)anthracene	56553	L ³	No		41,000	PASS
Benzo(a)pyrene	50328	-	20		NLL	PASS
Benzo(b)fluoranthene	205992		5 8		NLL	PASS
Benzo(g,h,i)perylene	191242		20 20		NLL	PASS
Benzo(k)fluoranthene	207089	2	25 8	-	NLL	PASS
Cnrysene	218019	1	8	-	NLL	PASS
Dibenzo(a,h)anthracene	53703	1	ND 8		NLL	PASS
Fluoranthene	206440	1	S		NLL	PASS
riuorene	86737	1	ND		730,000	PASS
ndeno(1,2,3-cd)pyrene	193395	1	NO.		890,000	PASS
2-Methylnaphthalene	91576	-	3 6		NLL	PASS
Naphthalene	91203	1	3 3		- di	PASS
Phenanthrene	85018	1	5 8	-	41,000	PASS
ryrene	129000	1	ND		1,100,000	PASS
Metals 119/kg Math. J. Con.					480,000	PASS
Lead	7/20021					
	170001	-	3290	3		

MICHIGHT DE ARTIMEN OF ENVIRONMENTAL QUALITY
REMEDIATION REDEVELOPMENT DIVISION
CLOSURE REPORT (CONTINUED)

	Chemical	Number	Range of Detected	Marianian	A	
Contaminant	Abstract	of C	Concentrations	Detected	Applicable RBSL Criterion (January 2006)	anuary 2006)
	Number	Samples	[Min-Max]		Soil Volatilization to Indoor Air Inhalation Criteria	Inhalation Criteria
	(0,0)	raken	(ug/kg)	(ug/kg)	(ug/kg)	
VOC Marked 6011A					Residential (Tier I)	PASS or FAIL
Benzene (i)	71427	4	5			
Ethylbenzene (I)	100414	1,	A3	43	1,600	PASS
Isopropyl benzene	98878	-	OIN 24	74	87,000	PASS
2-Methylnaphthalene	91576	<u>-</u>	200		390,000	PASS
Methyl-tert-butyl ether (MTBE)	1634044	- -	25		ĪD	PASS
Naphthalene	91202		5 8	1	5,900,000	PASS
n-Pronylhenzene (I)	103661	<u> </u>	80	ī	250,000	PASS
Tolliene (I)	103651	,	ND		ID	PASS
1 2 3 Timoth II	108883	1	200	200	250,000	PASS
1,2,3-irimetnyipenzene	526738	1	ND		na	PASS
1,2,4-Irimethylbenzene (I)	95636	1	ND		110.000	PASS
1,3,5-1 rimethylbenzene (i)	108678	1	ND		94,000	PASS
(Ayleries (1)	1330207	ь	200	200	150,000	PASS
PAH, ug/kg - Method 8270						
Acenaphthene	83329	1	ND		100 000 000	
Acenaphthylene	208968	1	ND	-	1 600 000	PASS
Anthracene	120127	1	ND	,	1,000,000	PASS
Benzo(a)anthracene	56553	Ľ	ND	•	T)OOC,OOC,OOC	PASS
Benzo(a)pyrene	50328	ь	ND		NIV	PASS
Benzo(b)fluoranthene	205992	1	ND		5	PASS
Benzo(g,h,i)perylene	191242	1	ND	1	NIV 6	PASS
Benzo(k)fluoranthene	207089	Р	ND	-	NIV	DASS
Chrysene	218019	1	ND		5	DASS
Dibenzo(a,h)anthracene	53703	1	ND	1	NIV (PASS
Fluoranthene	206440	1	ND	-	1 000 000 000	PASS
Fluorene	86737	1	ND	'	580,000,000	PASS
Indeno(1,2,3-cd)pyrene	193395	1	ND	-	NIV	PASS
2-Methylnaphthalene	91576	1	ND	,	540 000	PASS
Naphthalene	91203	ם	ND		1 000 000 000	2000
Phenanthrene	85018	1	ND		3 800 000	PASS
Pyrene	129000	1	ND	'	1 000 000	PASS
					1,000,000,000	PASS
Metals, ug/kg - Method 6020						
Lead	7439921	1	3,900	3,900	NLV	PASS
						100

REMEDIATION REDEVELOPMENT DIVISION CLOSURE REPORT (CONTINUED)

TOTAL TOTAL TOTAL						
	Chemical	Number	Range of Detected	Maximum	Applicable RBSL Criterion (January 2006)	(January 2006)
Contaminant	Number	Samples	[Min-Max]	Detected	Ambient Air {Y} Infinite Source Volatile Soil Inhalation Criteria	Y} nhalation Criteria
	(CAS)	Taken	(ug/kg)	(ug/kg)	(ug/kg)	
					Residential (Tier I)	PASS or FAIL
VOC, ug/kg - Metho d 8021A						
Benzene (I)	71432	1	ND	1	13,000	PASS
Ethylbenzene (I)	100414	1	42	42	720,000	PASS
sopropyl benzene	98828	1	ND	-	1,700,000	PASS
2-Methylnaphthalene	91576	1	ND		lD.	PASS
Methyl-tert-butyl ether (MTBE)	1634044	1	ND	•	25,000,000	PASS
Naphthalene	91203	1	ND	1	300,000	PASS
n-Propylbenzene (I)	103651	1	ND		Ū	PASS
Toluene (I)	108883	1	200	200	2,800,000	PASS
1,2,3-Trimethylbenzene	526738	1	ND	-	na	PASS
1,2,4-Trimethylbenzene (I)	95636	1	ND	-	21,000,000	PASS
1,3,5-Trimethylbenzene (I)	108678	1	ND	-	16,000,000	PASS
Xylenes (I)	1330207	1	200	200	46,000,000	PASS
Acenaphthene	83329	_	ND	_	81 000 000	PASS
Acenaphthylene	208968	1	ND	-	2,200,000	PASS
Anthracene	120127	1	ND	1	1,400,000,000	PASS
Benzo(a)anthracene	56553	1	ND	-	NLV	PASS
Benzo(a)pyrene	50328	1	ND	1	NLV	PASS
Benzo(b)fluoranthene	205992	1	ND	-	D	PASS
Benzo(g,h,i)perylene	191242	1	ND	-	NLV	PASS
Benzo(k)fluoranthene	207089	בן	ND	,	NLV	PASS
Chrysene	218019	1	ND	•	ID	PASS
Dibenzo(a,h)anthracene	53703	1	ND		NLV	PASS
Fluoranthene	206440	1	ND	1	740,000,000	PASS
Fluorene	86737	Ľ	ND	•	130,000,000	PASS
Indeno(1,2,3-cd)pyrene	193395	1	ND	-	NLV	PASS
2-Methylnaphthalene	91576	ь	ND	-	1,900,000	PASS
Naphthalene	91203	r	ND	•	1,400,000,000	PASS
Phenanthrene	85018	1	ND	_	160,000	PASS
Pyrene	129000	1	ND	-	650,000,000	PASS
Metals, ug/kg - Method 6020						
and and	7439921		2	3 000	VIIV	2000

MICHICATO SEARTMENT OF ELVIRONMENTAL QUALITY
REMEDIATION REDEVELOPMENT DIVISION
CLOSURE REPORT (CONTINUED)

APPENDIX E
COMPARISON TABLE FOR SOIL
FACILITY NAME: Federal Mogul Corporation World Headquarters
FACILITY NUMBER: 50005609

Thom:not	10	7			
Abstract	of	Concentrations	Detected	Applicable RBSL Criterion (.	January 2006)
Number	Samples	[Min-Max]		Direct Contact Crit	teria
(CAS)	aken	(ug/kg)	(ug/kg)	(ug/kg)	
				Residential (Tier I)	PASS or FAIL
71432	-	CON		100 000	
100414	1	42	42	140,000	PASS
98828	1	ND		390 000	PASS
91576	1	ND	r	8 100 000	PASS
1634044	1	ND	,	1 500,000	PASS
91203	ш	ND		16 000 000	PASS
103651	Ľ	ND	1	2 500 000	PASS
108883	₽	200	200	250,000	PASS
526738	ב	ND		na	PASS
95636	1	ND	-	110 000	DASS
108678	1	ND	,	94,000	PASS
1330207	1	200	200	150,000	PASS
83329	12	ND		41 000 000	
208968	1	ND		1 600 000	PASS
120127	1	ND		230,000,000	PASS
56553	1	ND	-	20,000	
50328	1	ND			PASS
205992	1	ND	-	2.000	PASS
191242	Þ	ND	1	2,000 20,000	PASS PASS
207089	1	ND		2,000 20,000 2,500,000	PASS PASS PASS PASS PASS
218019	ı	ND		2,000 20,000 2,500,000 2,500,000	PASS PASS PASS PASS PASS PASS
53703	ļ	3		2,000 20,000 2,500,000 200,000 2,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
206440	Ь			2,000 20,000 2,500,000 2,500,000 2,000,000 2,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
86737	P	ND		2,000 20,000 2,500,000 2,000,000 2,000,000 2,000,000 46,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
193395	<u> </u>	ND		2,000 20,000 2,500,000 2,000,000 2,000,000 2,000,000 46,000,000 27,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
	1	ND ND		2,000 20,000 2,500,000 2,500,000 2,000,000 2,000,000 46,000,000 27,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
91576	۰	ND ND ON		2,000 20,000 2,500,000 2,500,000 2,000,000 2,000,000 46,000,000 27,000,000 10	PASS PASS PASS PASS PASS PASS PASS PASS
91576 91203	-	ND ND		2,000 20,000 2,500,000 2,500,000 2,000,000 2,000,000 46,000,000 27,000,000 10 230,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
91576 91203 85018	→ -	ND N		2,000 20,000 20,000 2,500,000 2,000,000 2,000,000 46,000,000 27,000,000 10 1,600,000	PASS PASS PASS PASS PASS PASS PASS PASS
91576 91203 85018 129000	H H	ND N		2,000 20,000 2,500,000 2,000,000 2,000,000 2,000,000 46,000,000 27,000,000 1D 230,000,000 1,600,000 29,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
91576 91203 85018 129000		N N N N N N N N N N N N N N N N N N N		2,000 20,000 2,500,000 2,000,000 2,000,000 2,000,000 46,000,000 27,000,000 10 1,600,000 29,000,000	PASS PASS PASS PASS PASS PASS PASS PASS
	Chemical Abstract Number (CAS) 71432 100414 98828 91576 1634044 91203 103651 108678 1526738 95636 108678 1330207 208968 120127 56553 50328 205992 191242 207089 218019 53703 206440 86737	3 5 5 7 8 8 3 7 8 9 1 7 8 6 8 3 1 1 3 4 6 8 4 2 1 1 3 4 6 8 4	Samples Taken 1 Number Ran of Cc Samples Taken 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Number Range of Detected M	Number Range of Detected Maximum Of Concentrations Detected Detected Samples (IMin-Max) (Ig/kg) (Ig/kg)

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION RESTORATION DIVISION CLOSURE REPORT (CONTINUED)

APPENDIX F

SOIL SAMPLING RESULTS (LABORATORY)
FACILITY NAME: Federal-Mogul Corporation World Headquarters

FACILITY NUMBER: 50005609

VOLATURE								
VOLATILES Sample ID							1.2	
Sample ID	SB-:	1, MW-1				3.000		2-2-5-2-1
Sample Depth (feet BGS)		18-19						
Date Collected	3/	/24/07						
Date Extracted	4	/3/07			-			
Date Analyzed	4	/3/07						
Analytical Method No.	SW	/8260B		-				
Collection Method*		GP						
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Cone	MADI
X Benzene	N			1	CONC	IVIDL	Conc	MDL
X Ethylbenzene	4			 		 		 -
X Isopropylbenzene	NI			 	 			
X 2-Methylnaphthalene	N			+	 	+		
X Methyl tert-butyl ether	NI			+	 	+	-	
X Naphthalene	NI				 	+	+	
X n-Propylbenzene	NI				 			
X Toluene	200			 	-	-		<u> </u>
X 1,2,3-Trimethylbenzene	NI NI				 			
X 1,2,4-Trimethylbenzene	NE				 			
X 1,3,5-Trimethylbenzene	NE			- 				
X Xylenes	200	+						
	200	170	<u>'</u>					
METALS					Section Control of the Control of th			
Sample ID								
Sample Depth (feet BGS)		MW-1						
Date Collected		3-19						
Date Extracted		4/07						
Date Analyzed		9/07						
Analytical Method No.		9/07						
Collection Method*		5020A						
		SP						······································
CONSTITUENT (ug/kg) X Lead	Conc	MDL	Conc	MDL	Conc	MDL	Comm	1404
			COILC	TIVIDE	COIL	INIUL	LCOUC	IMIDL
^ Leau	3,900			INIDL	Conc	IVIUL	Conc	MDL
		1,100			Conc	INIDE	Conc	MDL
POLYNUCLEAR AROMATICS (PNAS)				IMDL	Conc			
POLYNUCLEAR AROMATICS (PNAs) Sample ID		1,100					CONC	
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS)	SB-1,	1,100						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected	SB-1,	1,100 MW-1						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted	SB-1, 18 3/2	1,100 MW-1 -19						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed	SB-1, 18 3/2 4/3	1,100 MW-1 -19 1/07						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No.	SB-1, 18 3/2 4/3 4/3	1,100 MW-1 -19 1/07						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method*	SB-1, 18 3/2 4/3 4/3 SW8	1,100 MW-1 19 1/07 8/07						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg)	SB-1, 18 3/2 4/3 4/3 SW8	1,100 MW-1 -19 1/07 3/07 3/07 270C			2 2 7 7 8 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene	SB-1, 18 3/2 4/3 4/3 SW8 C	1,100 MW-1 -19 1/07 3/07 3/07 270C SP MDL						
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphtylene	SB-1, 18 3/2 4/3 4/3 SW8 C Conc	1,100 MW-1 19 1/07 8/07 8/07 270C 6P MDL 180			2 2 7 7 8 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene	SB-1, 18 3/2 4/3 5W8 C Conc ND	1,100 MW-1 -19 1/07 3/07 2/07 270C SP MDL 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphtylene	SB-1, 18 3/2 4/3 5W8 C Conc ND ND	1,100 MW-1 19 1/07 8/07 2/07 2/00 EP MDL 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene	SB-1, 18 3/2 4/3 5W8 Conc ND ND	1,100 MW-1 -19 1/07 -/07 -/07 -/07 -/07 -/07 -/08 -/08 -/08 -/08 -/08 -/08 -/08 -/08			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene	SB-1, 18 3/2 4/3 4/3 SW8 C Conc ND ND ND	1,100 MW-1 -19 1/07 -/07 -/07 -/07 270C			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene	SB-1, 18 3/2 4/3 5W8 6 Conc ND ND ND	1,100 MW-1 -19 1/07 -/07 -/07 270C			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene	SB-1, 18 3/2 4/3 SW8 C Conc ND ND ND ND ND	1,100 MW-119 1/07 -/07 -/07 270C			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Chrysene	SB-1, 18 3/2 4/3 4/3 SW8 GCONC ND	1,100 MW-119 1/07 3/07 270C 6P MDL 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Benzo(k)fluoranthene X Chrysene	SB-1, 18 3/2 4/3 4/3 SW8 G Conc ND	1,100 MW-119 1/07 3/07 270C 6P MDL 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthylene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene	SB-1, 18 3/2 4/3 4/3 SW8 C Conc ND	1,100 MW-1 -19 1/07 3/07 270C 3P MDL 180 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene	SB-1, 18 3/2 4/3 4/3 SW8 C Conc ND	1,100 MW-119 1/07 3/07 270C 3P MDL 180 180 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene	SB-1, 18 3/2 4/3 4/3 SW8 CONC ND	1,100 MW-119 1/07 3/07 270C 3P MDL 180 180 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluorene X Fluorene X Indeno(1,2,3-cd)pyrene	SB-1, 18 3/2 4/3 5W8 6 Conc ND	1,100 MW-119 1/07 3/07 270C 3P MDL 180 180 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Dibenzo(a,h)anthracene X Dibenzo(a,h)anthracene X Iludeno(1,2,3-cd)pyrene X Indeno(1,2,3-cd)pyrene	SB-1, 18 3/2 4/3 5W8 6 Conc ND	1,100 MW-119 1/07 8/07 270C 6P MDL 180 180 180 180 180 180 180 180 180 180			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(s,h)iperylene X Benzo(a)anthracene X Benzo(a)anthracene X Benzo(a)anthracene X Benzo(a)anthracene X Benzo(a)anthracene X Benzo(a)anthracene X Benzo(b)fluoranthene X Fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Indeno(1,2,3-cd)pyrene X 2-Methylnaphthalene X Naphthalene	SB-1, 18 3/2 4/3 5W8 6 Conc ND	1,100 MW-1 -19 1/07 -/07 -/07 -/07 -/07 -/07 -/07 -/07 -			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)ffuoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluoranthene X Iluoranthene X Indeno(1,2,3-cd)pyrene X 2-Methylnaphthalene X Naphthalene X Naphthalene	SB-1, 18 3/2 4/3 4/3 SW8 CCOC ND	1,100 MW-1 -19 1/07 //07 //07 //07 //07 //07 //07 //07 //08 MDL 180 180 180 180 180 180 180 18			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(s,h)iperylene X Benzo(a)anthracene X Benzo(b)fluoranthene X Fluoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Indeno(1,2,3-cd)pyrene X 2-Methylnaphthalene X Naphthalene X Naphthalene X Naphthalene X Naphthalene	SB-1, 18 3/2 4/3 4/3 SW8 C Conc ND	1,100 MW-1 -19 1/07 -/07 -/07 -/07 -/07 -/07 -/07 -/07 -			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
POLYNUCLEAR AROMATICS (PNAS) Sample ID Sample Depth (feet BGS) Date Collected Date Extracted Date Analyzed Analytical Method No. Collection Method* CONSTITUENT (ug/kg) X Acenaphthene X Acenaphthylene X Anthracene X Benzo(a)anthracene X Benzo(a)pyrene X Benzo(b)fluoranthene X Benzo(g,h,i)perylene X Benzo(k)ffuoranthene X Chrysene X Dibenzo(a,h)anthracene X Fluoranthene X Fluoranthene X Iluoranthene X Indeno(1,2,3-cd)pyrene X 2-Methylnaphthalene X Naphthalene X Naphthalene	SB-1, 18 3/2 4/3 4/3 SW8 CCOC ND	1,100 MW-1 -19 1/07 //07 //07 //07 //07 //07 //07 //07 //08 MDL 180 180 180 180 180 180 180 18			2 2 7 7 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			

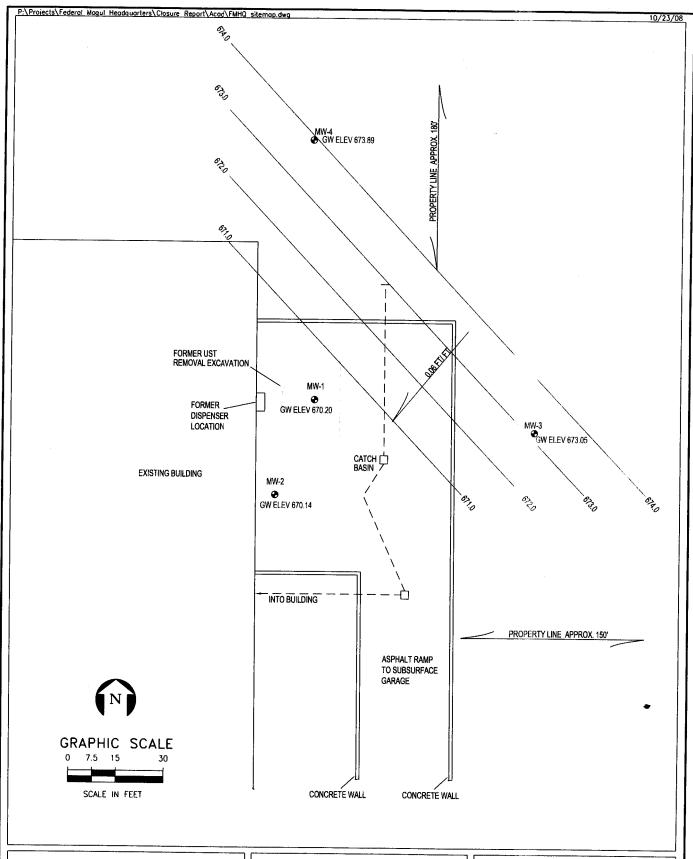


FIGURE G-1.

POTENTIOMETRIC

SURFACE MAP - 3/25/07

Source: ECT, 2008.

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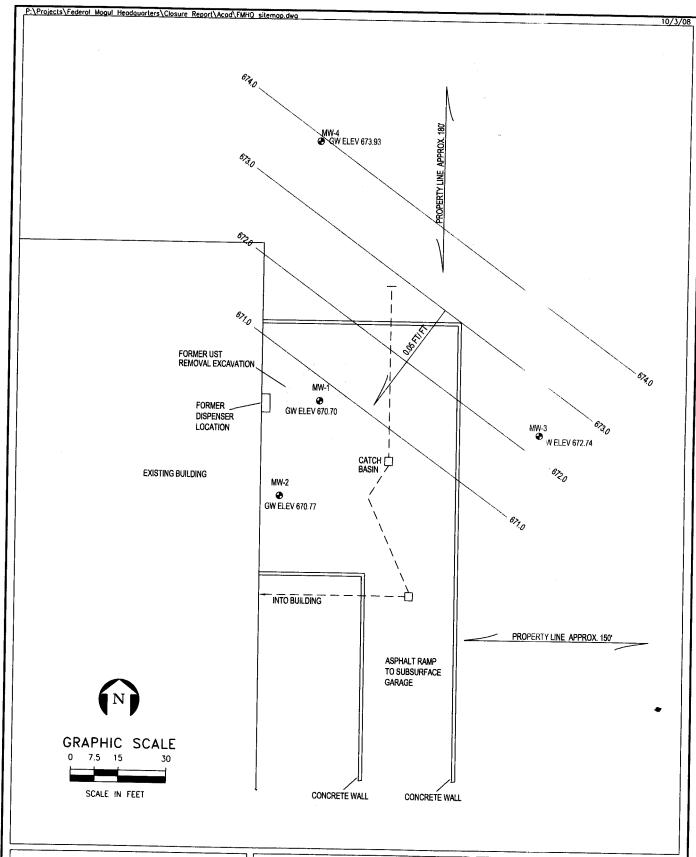


FIGURE G-2. POTENTIOMETRIC SURFACE MAP - 9/27/07

Source: ECT, 2008.

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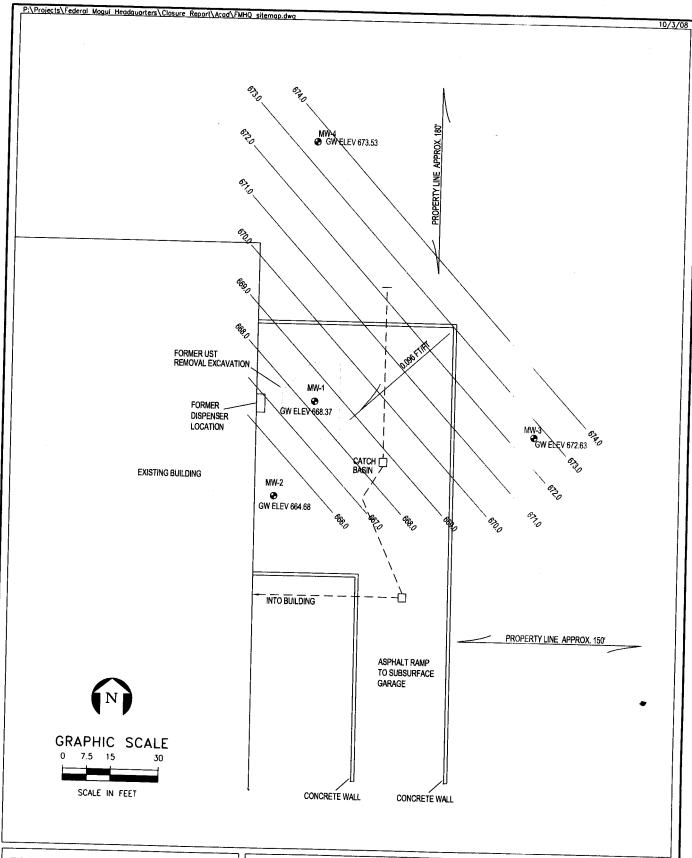


FIGURE G-3.
POTENTIOMETRIC
SURFACE MAP - 1/31/08

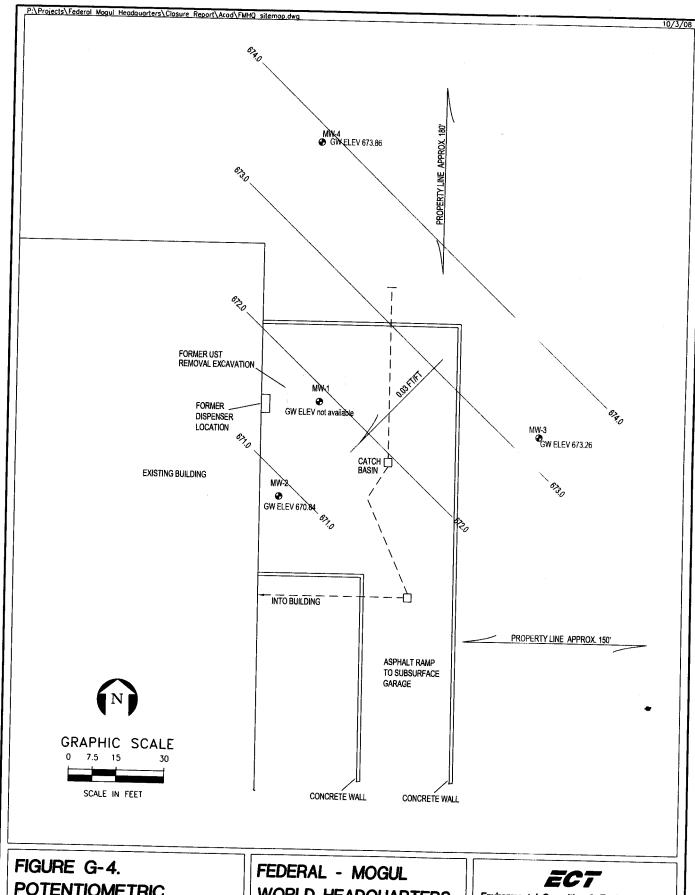
Source: ECT, 2008.

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POTENTIOMETRIC SURFACE MAP - 4/10/08

Source: ECT, 2008.

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION RESTORATION DIVISION CLOSURE REPORT (CONTINUED)

APPENDIX H **ELEVATION DATA**

FACILITY NAME: Federal-Mogul Corporation World Headquarters

FACILITY NUMBER: 50005609

Well Location	Top of Casing Elevation (ft)	Ground Elevation (ft)	Depth to Bottom (ft)	3/25/07	to V	epth Vater				ater	
MW-1 MW-2 MW-3 MW-4	670.75 671.06 685.89 684.69	671.04 671.37 686.19 685.03	6.5 8.0 20.0 18.0	0.55 0.92 12.84 10.80	9/27/07 0.05 0.29 13.15 10.76	2.38 6.38 13.26 11.16	na 0.22 12.63 10.83	3/25/07 670.20 670.14 673.05 673.89	9/27/07 670.70 670.77 672.74 673.93	1/31/08 668.37 664.68 672.63 673.53	4/10/08 na 670.84 673.26 673.86

Notes:

Stormwater Basin's ground surface elevation = 670.66

On 4/10/08, the static water in MW-1 stabilized above the top of casing. A temporary riser extension was immediately used for



May 18, 2011

Information Transmittal

To:

Mr. James LeBar

DEQ - Southeast MI District Office

27700 Donald Court Warren, MI 48092

From:

John D'Addona

adde

Environmental Consulting & Technology, Inc. 2200 Commonwealth Boulevard, Suite 300

Ann Arbor, Michigan 48105

Mr. LeBar,

Enclosed are the LUST Closure Cover Sheet and a new Table of Contents for the Federal-Mogul World Headquarters, Facility ID Number: 50005609, as requested in your e-mail to me on May 17, 2011. I know that the statutory review time is 6 months; however I respectively request that you please review this closure request at your earliest convenience as there is no substantive change from the closure request made with the previous submittal on June 25, 2009. Call me if you have any questions.

SUUTILIZATION

John D'Addona



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – REMEDIATION & REDVELOPMENT DIVISION PO BOX 30426, LANSING, MI 48909-7926, Phone 517-373-9837, Fax 517-373-2637, E-mail <u>DEQ-STD-TANKS@michigan.gov</u>

LEAKING UNDERGROUND STORAGE TANK CLOSURE REPORT

INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE Underground Storage Tank Professional (CP) MUST sign below. Failure to su administrative penalties as provided for in Part 213, Section 21313a of 198 REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD offices.	ibmit this report with 34 PA 451, as amend	nin the stated time period med. PLEASE RETURN THIS	COMPLETED
FACILITY NAME: Federal-Mogul World Headquarters		FACILITY ID NUMBER:	50005609
STREET ADDRESS: 26555 Northwestern Highway			
CITY: Southfield ZIF	P: 48033	COUNTY: Oakland	
DATE(S) RELEASE DISCOVERED: April 5, 2007	CONFIRMED RE	LEASE NUMBER(S): C-0	080-07
O/O NAME: Federal-Mogul Corporation (Operator)			
O/O STREET ADDRESS: 26555 Northwestern Highway		STATE: MI	ZIP: 48033
CONTACT PERSON: Mark Bauer		PHONE NUMBER: 248-	354-8912
ANSWER ALL QUESTIONS (E	O NOT LEAVE BLAN	NKS):	
1. a. Has the UST been emptied? YES NO (If no, explain wh	ny):		
	f no, explain why):		
2. Free product present: a. Currently? YES NO If YES, total			
b. Previously? YES NO If YES, t			
3. Have vapors been identified in any confined spaces (basement, see4. State the number of homes where drinking water is or was affected			
5. Estimated distance and direction from point of release to nearest:			
a. Private well: None known within 1 mile b. Municipal well: No mile.	ne known within 1	 c. Surface water/wetland within 1 mile. 	nd: None known
6. Since last report: a. cubic yards of soil remediated: 0		gallons of groundwater re	
Totals to date: a. cubic yards of soil remediated: 0		gallons of groundwater re	emediated: 0
 Michigan RBCA Site Classification (1-4): 4 Previous R Has contamination migrated off-site above Tier 1 Residential RBSL 	BCA Site Classifica		
If YES, have off-site impacted parties been notified (per Section 21:			
10. Is an institutional control required for contamination that has migra			
Has MTBE been detected in any groundwater sampl	e? M	aximum concentration of N	
YES NO CERTIFICATION OF REF	1 -	ound water. Not detected	
I, the undersigned CP, hereby attest to the best of my knowledge and I true, accurate, and complete. I certify that the report was submitted to on May 17, 2011 (Date submitted REQUIRED)		ments in this document an Redevelopment Division (d all attachments are (RRD)
Constant of the Constant of th		Win-	19 30
John O bilden P. E. 5/17/11 Je	ohn J. D'Addona, P.	E. MANACED'S NAME	27.17 W
Original Signature - (REQUIRED) Date Plant D'Addona	wirenmental Canau	WANAGER S NAWE € / (C#U
John J. D'Addona, P.E.ErPRINT CP's NameNo	AME OF CONSULT	E. MANAGER'S NAME Iting & Technology, Inc. (E	CITY TO THE CONTRACT
CP ID 414 Q	C ID: Z 0062	_	. AGE
ADDRESS 2200 Commonwealth Blvd., Suite 300, Ann Arbor, MI 4810	5 PHONE: <u>734-</u>	769-3004 FAX: <u>73</u> -	4-769-3164
CERTIFICATION OF CLOSURE			
Type of RBCA Evaluation: ☑Tier 1 ☐Tier 2 ☐Tier 3 Closure report based on which type of land use?: ☑Residential ☐Comme 3. Institutional Controls: ☑None ☐Notice of Corrective Action ☐Restrictive			
I certify under penalty of law that corrective actions associated with the above repart 213, 1994 PA 451, as amended, and current departmental guidance and purther certify that this document and all attachments were prepared under my at qualified personnel properly gather and evaluate the information submitted gathering the information, the information submitted is, to the best of my knowlessignificant penalties for submitting false information, including the possibility of the contraction.	rocedures available at direction or supervision Based on my inquiry edge and belief, true, a	the time the work was complon in accordance with a system of the person or persons directions accurate, and complete. I amount in the complete is a complete in the complete i	leted. m designed to assure ectly responsible for aware that there are
CP Signature - (REQUIRED) John Uaddm	PE	Date5	117/11

Instructions - Utilize the following checklist to ensure that all required information is provided in the Closure Report. Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the Closure Report must be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

If an Initial Assessment Report (IAR) and/or a Final Assessment Report (FAR) have not been submitted for this release, provide all required information from the IAR and/or FAR not included below.

Secti	ion	Table of Contents	Page
1.0	PI	ROJECT CHRONOLOGY	
	A.	Provide the date and time the confirmed release(s) was/were discovered and reported.	7 of 10/22/08 Closure Report
	В.	Provide the IAR submittal date.	7 of 10/22/08 Closure Report
	C.	Provide the FAR submittal date.	7 of 10/22/08 Closure Report
	D.	Provide dates for any other submittals.	7 of 10/22/08 Closure Report
2.0	<u>su</u>	MMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED	
2.1		IMMEDIATE RESPONSE ACTION IMPLEMENTATION	
		If an IAR has not been previously submitted, provide all information requested in Section 1.0 of the IAR	8 of \$0/22/08 Closure Report
2.2	<u>}</u>	FREE PRODUCT DISCOVERY AND REMOVAL	

PRODUCT DISCOVERY AND REMOVAL

If free product has not been discovered, then proceed to Section 2.3.

A. Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(xviii). Refer to the Storage Tank Division Operational Memorandum No. 7, Identification, Reporting, and Recovery of Free Product at LUST Sites.

8 of 10/22/08 Closure Report

B	Attach a final RRD Free Product Recovery Status Report (EQP 3850) if not previously submitted.	8 of 10/22/08 Closure Report
2.3	SITE ASSESSMENT ACTIVITIES	
A	If an IAR has not been previously submitted, provide all information requested in Section 3.0 of the IAR.	8 of 10/22/08 Closure Report
В	If a FAR has not been previously submitted, provide all information requested in Section 2.0 of the FAR.	8 of 10/22/08 Closure Report and pages 1-6 of 6/25/09 Response to Audit of Corrective Actions resubmitte d with this pkg.
2.4	SITE CLASSIFICATION	

A. Indicate the current Site Classification Level, in accordance with Storage Tank Division Operational Memorandum No. 5, Leaking Underground Storage Tank (LUST) Site Classification. System.

10 of 10/22/08 Closure Report

Section	Table of Contents	Page
В.	Provide a justification for this classification. Identify the current conditions that are the basis of the classification.	10 of 6/22/08 Closure Report
C.	Indicate whether the site classification has changed since the submission of the last report.	11 of 6/22/08 Closure Report
2.5	TIERED EVALUATIONS AND CLEANUP GOALS	
A.	Indicate whether a site-specific Tier II or Tier III evaluation has been conducted for this site.	11 of 6/22/08 Closure Report
В.	If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumptions as defined in the Storage Tank Division Operational Memorandum No. 4, <i>Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank (LUST) Sites.</i>	11 of 6/22/08 Closure Report
exp	TE: If a Tier II evaluation was performed and described in the IAR or the FAR, plicitly indicate where different assumptions or site-specific information were add in this Tier II or Tier III evaluation and why the change was justified.	report
C.	Provide the calculations and reference citations supporting the development of the relevant Tier II or Tier III SSTLs.	11 of 6/22/08 Closure Report
	Provide a table which compares the maximum remaining contaminant concentrations for each required parameter for all media to the appropriate RBSLs (as provided in the Storage Tank Division Operational Memorandum No. 4), and/or the calculated SSTLs. Identify all applicable land use scenario(s).	11 of 10/22/08 Closure Report and pages 7-8 of 6/25/09 Response to Audit of Corrective Actions resubmitte d with this pkg.

2.6 MODELING

Provide all modeling documentation. Refer to the Storage Tank Division Operational Memorandum No. 10 *Presentation of Tier 2 and 3 Groundwater Modeling Evaluations*.

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2.7 NOTICES AND RESTRICTIONS

If the closure does not require the use of institutional controls to restrict land or resource use, then proceed to Section 2.8.

NOTE: Draft copies of all Restrictive Covenants and Notices of Corrective Action for off-site institutional controls must be submitted to the RRD for approval prior to filing. Refer to Storage Tank Division Operational Memorandum No. 12, Institutional Controls and Public Notice Requirements and Procedures.

A. Submit copies of all notices or restrictions which have been filed, and provide proof of filing these notices or restrictions. If the person filing is not the property owner, attach a copy of the written permission for the filing from the property owner.

NA

B. Identify the individuals or segments of the public which have been provided with notice of the proposed land use restrictions or limitations to be placed on resource use. Include the names and addresses of the affected parties (unless large segments of the public will be provided notice, e.g., users of a municipal water supply system). Include proof that notice was provided to the affected parties.

13 of 10/22/08 Closure Report

C. Provide a map depicting the location(s) of the individuals or segments of the noticed public.

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D. Describe any alternate mechanism utilized to restrict exposure to regulated substances as defined in Section 324.21310a(3), and justify how this mechanism reliably restricts exposure to the regulated substances.

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2.8 PERMITS

List all discharge permits and/or permit exemptions that were required for the corrective action, and include the type of permit, permit number, application date, approval date and termination date.

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Section	Table of Contents	Page
2.9	CORRECTIVE ACTION PLAN	
,	Summarize the corrective action activities that resulted in release closure. Include the operating history of any active treatment systems.	13 of 10/22/08 Closure Report
E	. Summarize the types of monitoring activities performed, including the media and parameters monitored.	13 of 10/22/08 Closure Report
C	Attach performance monitoring data.	13 of 10/22/08 Closure Report
D	Describe and justify changes to the previously submitted Corrective Action Plan.	13 of 10/22/08 Closure Report
)	Provide the total volume of soil remediated, and include disposal location and proof of disposal (e.g., invoices, not load tickets) for all soils excavated subsequent to submittal of the last report, if appropriate.	13 of 10/22/08 Closure Report
F	Provide the total volume of groundwater actively remediated to date, and include disposal documentation, if appropriate.	13 of 10/22/08 Closure Report
3.0 <u>C</u>	OSURE VERIFICATION SAMPLING	
3.1	SOIL CLOSURE VERIFICATION	•

NOTE: Verification sampling must be conducted whenever contaminated soils are identified but not remediated, including when contaminated soil is returned to an excavation after the removal of a UST.

- A. Describe the soil verification sampling strategy applied at the site by providing the following:
 - 1. A scaled site map which identifies the former extent of the soil contamination, and the soil verification sampling locations relative to existing site features. (Multiple chemical contaminants and multiple sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)

14 of 10/22/08 of Closure

Section		Table of Contents	Page
ı	2.	For a corrective action involving excavation, a scaled drawing(s) showing the floor	Report
		and walls of the excavation and the associated sampling locations. The drawing should also depict the subsurface stratigraphy, soil types, fractures, discolored soil locations, adjoining conduits or potential migration pathways, and locations of	
		former and existing UST system components, as appropriate.	14 of
			10/22/08
			Closure
			Report

Section	Table of Contents	Page
	3. A description of how the number and location of samples collected for soil verification purposes was established. If your sampling strategy differs from the MDEQ <i>Verification of Soil Remediation Guidance Document</i> and Storage Tank Division Operational Memorandum No. 9, <i>Groundwater and Soil Closure Verification Guidance</i> , provide justification.	
	4. A list of the analytical parameters used to verify the soil remediation.	14 of 10/22/0 Closure Report
	5. A justification if all soil verification samples were not analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.	
В.	Provide a table with laboratory data showing the results of all verification soil sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational memorandum No. 14 <i>Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.</i> The table should include the following:	14 of 10/22/08 Closure Report
	 Sample ID Sample depth Date of collection Dates of extraction and analysis Method Detection Limits Analytical method 	
	OTE: The RRD may request copies of the laboratory data sheets, chain-of-custody ms, and all available QA/QC information.)	
C.	Provide copies of all soil boring logs not previously submitted.	14 of 10/22/08 Closure Report
3.2	GROUNDWATER CLOSURE VERIFICATION	
A.	Describe the groundwater verification sampling strategy applied at the site by providing the following: 1. A scaled site map which identifies the former extent of groundwater contamination, the groundwater verification sampling locations relative to existing site features, and the groundwater flow direction(s). (Multiple chemical contaminants and multiple	•
	aquifer/sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)	15 of 10/22/08 Closure Report
	2. A description of how the sampling frequency and duration of sampling for groundwater verification purposes was established. If your sampling strategy differs from the Storage Tank Division Operational Memorandum No. 9.	15 of 10/22/08 Closure Report

Section	Table of Contents	Page
	3. A list of the analytical parameters used to verify groundwater closure	15 of 10/22/08 Closure Report
	4. A justification if all groundwater verification samples were not analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 <i>Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.</i>	15 of 10/22/08 Closure
		Report
В.	Provide a table with laboratory data showing the results of all verification groundwater sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational Memorandum No. 14 <i>Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.</i> The table should include the following:	15 of 10/22/08 Closure Report
	1. Sample ID	15 of
		10/22/08 Closure Report
	2. Sampling depth or screened interval	15 of 10/22/08 Closure Report
	3. Date of collection	15 of 10/22/08 Closure
	4. Dates of extraction and analysis	Report 15 of 10/22/08 Closure
	5. Method Detection Limits	Report 15 of 10/22/08 Closure
	6. Analytical method	Report 15 of 10/22/08 Closure Report
	TE: The RRD may request copies of the laboratory data sheets, chain-of-custody as, and all available QA/QC information.)	
C	Attach copies of the following:	
	1. Boring logs not previously submitted.	15 of 10/22/08 Closure
	2. Well construction diagrams not previously submitted.	Report 15 of 10/22/08 Closure Report

Section	Table of Contents	Page
	3. Potentiometric surface maps for each groundwater verification sampling event.	15 of 10/22/08 Closure Report
	4. Elevation data (USGS datum preferred), including top-of-casing and grade elevations, and depth to groundwater for each groundwater verification sampling event.	15 of 10/22/08 Closure Report
3.3	CLOSURE VERIFICATION FOR OTHER MEDIA	
A.	Describe the verification sampling strategy for other media applied at the site.	15 of 10/22/08 Closure Report
В.	Provide a scaled site map which identifies the verification sampling locations relative to existing site features and boundaries, if appropriate.	15 of 10/22/08 Closure Report
C.	Provide a table with the laboratory data showing the results of all verification sampling performed to date in the other specified environmental media.	15 of 10/22/08 Closure Report

(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)



Environmental Consulting & Technology, Inc.

June 25, 2009

Ms. Christy Clark, Geologist Michigan Department of Environmental Quality Southeast Michigan District Office Remediation and Redevelopment Division 27700 Donald Ct. Warren, MI 48092-2793

Subject: Response to Audit of Corrective Actions

Confirmed Release Date: April 5, 2007

Location: Federal-Mogul Corp. World Headquarters 26555 Northwestern Highway, Southfield, Oakland Co., MI

Facility ID No. 5-0005609

Dear Ms. Clark:

On behalf of the Federal-Mogul Corporation, Environmental Consulting & Technology, Inc. (ECT) is providing the following information in response to the Michigan Department of Environmental Quality's (MDEQ's) Audit Response Letter of April 27, 2009. Based on the audit response, there appears to be some misunderstanding regarding the former UST contents and a number of the site conditions that affects the way the release site is evaluated at the Federal-Mogul Headquarters site in Southfield, Michigan. We do not agree with MDEQ that this site requires additional investigation to achieve closure and are providing the following data to support this conclusion.

First, there are a number of facts surrounding this release and site conditions affecting the release area that are worth reiterating or adding to the discussion included in the previously submitted Closure Report dated October 22, 2008, prior to responding to each individual bullet point in the Audit Response Letter. Additionally, we have provided a number of photographs of the release area which we hope will clear up a number of questions.

- The former gasoline UST was removed in 1986. No soil disposal records are available so it is presumed that the UST excavation soil was returned to the excavation following removal of the UST. The purpose of the UST was to fuel executive automobiles at the entrance to the underground parking garage. The UST registration form incorrectly identifies the UST use as "unknown." However, the release notification form submitted in April 2007, clearly states that the release was due to gasoline. This form is attached.
- The former fueling area for the vehicles is located in a paved area (see Revised Figure 2) at the bottom of a long descending ramp just outside the underground

2200 Commonwealth Boulevard, Ste 300 Ann Arbor, MI 48105

> (734)769-3004

FAX (734) 769-3164 parking area (hereinafter known as the apron) approximately 15 feet below the surrounding land surface. As a result, the groundwater generally resides less than a foot below the pavement at the base of the ramp.

- The apron at the bottom of the ramp is approximately 61 feet by 78 feet.
- Monitor wells 1 and 2 (MW-1 and MW-2) are in the apron area at the base of the ramp while monitor wells 3 and 4 (MW-3 and MW-4) are outside of the ramp and apron area at normal grade level i.e. the top of casings for MW-3 and MW-4 are approximately 15 feet above MW-1 and MW-2 top of casings.
- MW-3 and MW-4 were placed at some distance from the source area in order to establish a site ground water flow direction. Additionally, there are numerous utilities on the outside of the ramp and apron retaining walls which required the placement of MW-3 and MW-4 further rather than closer to MW-1.
- MW-2 was placed downgradient from the former UST area.
- The catch basin in the apron area is not only a drain for the paved apron area, but is also a drainage point for underlying "finger drains" that help keep the asphalt and concrete from breaking up due to the freezing and thawing of the near surface groundwater. The water that enters the catch basin flows by gravity into the building basement to a sump where it is pumped to an elevation whereby it can enter the storm sewer system (that flows by gravity) that drains the parking areas, collects roof water and directs runoff from other impervious surfaces. This storm sewer system lies completely above the elevation of the apron area and therefore cannot be a potential pathway of migration.
- There are no utilities outside of the apron area that are at or below the former UST area where the release would have occurred.

The following responses are organized by the order of audit findings as addressed in MDEQ's audit response of April 27, 2009.

MDEQ Audit Finding #1

- The extent of contamination was not properly defined pursuant to Section 21311a (1)(a) of Act 451. The vertical and horizontal extent of soil and groundwater contamination should be defined to the most restrictive RRD Tier 1 residential criteria whether that exposure pathway is relevant or not.
- a) <u>Soil contamination was not properly delineated</u>. <u>Site characterization needs to be</u> <u>addressed by analyzing more than one soil sample</u>.
- i) <u>Verification soil samples were not adequately taken in the area of the former excavation.</u> The soil sample collected from MW-1 is not adequate verification sampling.



Regulatory Citing

First Reference the attached Section 324.2131(1)(a) for understanding of the regulation

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT) Act 451 of 1994

324.21311a Final assessment report; information; use of institutional controls regarding off-site migration; implementation of corrective action plan upon review and determination by department.

Sec. 21311a.

- (1) Within 365 days after a release has been discovered, a consultant retained by an owner or operator shall complete a final assessment report that includes a corrective action plan developed under section 21309a and submit the report to the department on a form created pursuant to section 21316. The report shall include, but is not limited to, the following information:
- (a) The extent of contamination.

Federal-Mogul Response:

Groundwater within the former UST area was reported to be just inches below the pavement in 3 of 4 quarterly measurements. The soils above saturation are asphalt bedding material and imported sand that was used to fill the remainder of the UST excavation when said tank was removed in 1986. The former 2000 gallon unleaded gasoline tank (64" diameter and 12' long) was installed to approximately 8 ft bgl. Thus the base of the UST and components of said UST were below the apparent groundwater level (at a point of saturation) at the time the assessment was conducted. Based upon the former UST area (which would have been backfilled with approximately 12 yards of material which likely consisted of soil immediately surrounding the UST and supplemented with additional clean sand to completely fill the excavation) is in a state of saturation. Had the UST just been removed, a groundwater sample would have been collected in the excavation in lieu of the two bottom soil samples. MW-1 served as that groundwater sample.

The one soil sample referenced (SB-1, MW-1 @ 18-19 ft) was collected to verify vertical extent of contamination below the extent of groundwater saturation (8 ft) i.e. is there a smear zone below the former UST excavation? Analytical data supports that the soil sample did not contain compounds above any residential criteria. There was no visual or olfactory evidence of soil or groundwater contamination throughout SB-1. Additionally, geology confirms that 10 ft of clay exists below the saturated zone defined as the former UST excavation.

b) Groundwater contamination was not properly delineated. Additional monitoring wells are needed closer to the source area. Additional groundwater investigation is needed along the storm sewer as well.

Federal-Mogul Response:

Only MW-1 supports levels above the GSI residential criteria. MW-1 was installed in the middle of the former UST location. The additional wells were installed around the former UST area to define the extent of impact and determine groundwater flow direction (Figure 3 of the Closure Report). The positions of MW-3 and MW-4 are based upon physical constraints of the property (former UST is in the apron area which is +/- 15 ft lower than the elevation controlled by the vertical concrete walls around said apron area). In addition shallow utilities computer/telephone lines run proximal to the north and east sides of the concrete retaining walls (apron area). It should be referenced that these shallow utilities are +/- 9 ft above the elevation of the top of the apron area and therefore do not intersect In addition, as reported a 4 ft wide concrete foundation wall supports the concrete retaining wall. Based upon these physical conditions MW-3 and MW-4 were established as close to the parking dock which would result in data that could be used to define groundwater flow. MW-2 was installed down gradient of the former UST area [(based upon groundwater level measurements), {Figure 3}]. Samples from MW-2, MW-3 and MW-4 don't support concentrations above the residential criteria (4 quarters).

MDEQ Audit Finding #2

• Since the contents of the underground storage tank are listed as unknown on the confirmed release report, both soil and groundwater samples should be analyzed for the parameters associated with unknown contents.

Federal-Mogul Response

Attached is the Storage Tank Facilities List SID-DEQ, which states Substance Released Unknown. Also attached is a copy of the Release Report submitted by Federal-Mogul Corp. which documents that the former content was gasoline. Therefore, the soil and groundwater samples were analyzed for the correct parameters (gasoline).

MDEQ Audit Finding #3

• The map provided depicting the former excavation area is insufficient. A detailed map outlining where the tank, piping and dispenser(s) were located should be provided in accordance with 21308a(1)(b)(vi)(A-C) of Act 451.

Federal-Mogul Response

An amended Figure 2 from the Closure Report has added approximate locations of the former UST piping based on our understanding of the former UST location prior to its removal in 1986 and portions of blueprints depicting the catch basin and storm sewer in the apron area. However, the blueprint source indicates that these features have no scale.

MDEQ Audit Finding #4

• The Risk-Based Corrective Action (RBCA) process was not properly evaluated per Section 21309a(2)(a) of Act 451. This evaluation process will need to be reevaluated after additional soil and groundwater samples have been analyzed.

Regulatory Citing

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT) Act 451 of 1994

324.21309a Corrective action plan.

Sec. 21309a.

- (2) A corrective action plan shall include all of the following:
- (a) A description of the corrective action to be implemented, including an explanation of how that action will meet the requirements of the RBCA process. The corrective action plan shall also include an analysis of the selection of indicator parameters to be used in evaluating the implementation of the corrective action plan, if indicator parameters are to be used. The corrective action plan shall include a description of ambient air quality monitoring activities to be undertaken during the corrective action if such activities are appropriate.

History: Add. 1995, Act 22, Imd. Eff. Apr. 13, 1995;-- Am. 1996, Act 116, Imd.

Eff. Mar. 6, 1996

Popular Name: Act 451 Popular Name: NREPA

Federal-Mogul Response:

The corrective action meets the requirements of RBCA because the extent was properly evaluated, as discussed in the rest of this response.



MDEQ Audit Finding #5

• The location and depth of nearby underground sewers and utility lines were not provided in accordance with Part 21308a(1)(b)(xi) of Act 451, and the GSI (Groundwater Surface Water Interface) pathway was not adequately addressed. The storm system on the site empties into the open drain which is considered a possible receptor. The GSI, if applicable, should be addressed at that point. Specific identification and depths of all utilities at the site should be provided whether the utility runs through the former excavation or not. This information must be provided to determine if a contaminant migration pathway in a utility corridor exists.

Federal-Mogul Response:

The area of the former UST is saturated to just below the paved apron area most of the year. Just below the asphalt/concrete are "finger drains" which continuously keeps the groundwater surface sufficiently below the pavement in order to mitigate detereoration due to frost and freezing. The sealed storm sewer catch basin (base of the ramp, revised Figure 2) with invert elevations just below the base material of the apron is the closest and only known subsurface utility in the vicinity of the former UST and at an elevation that is at or below the elevation of the paved apron area. As indicated in the quarterly monitoring of the catch basin, collected water and minor amounts of contaminants drain via the storm sewer to the building at an estimated grade of 0.4% where it is connected to a building sump and are elevated via the sump pump into the site-wide storm sewer system which is at a higher elevation (approximately 8-10 feet) above the apron area and groundwater. Additional storm sewer drains enter from the parking lots and roofs prior to the final site discharge of storm water an estimated 500 feet southeast from the point it enters the sump.

The only other potential for contaminant migration would be via groundwater to the area beneath the building where it would encounter building foundations or perhaps be intercepted by drain tiles where it would likely enter the building sump as described above or would continue a migratory path below or along the building foundations.

Samples from the very shallow saturated backfill were not collected because the finger drain system would be the path of least resistance when compared to the storm sewer backfill material and therefore would flow within the storm sewer. It appears that minor amounts of contamination either remaining in the former UST excavation area or from vehicle drips to the pavement are being "washed" out of the soil or off of the pavement and into the storm sewer. Even if low levels of contaminants were to somehow get into the saturated storm sewer backfill material it is not reasonable to assume that any significant quantity of contamination could migrate beyond the point of the sump beneath the building. Should very small quantities enter the sump, they will be significantly diluted at the collection point by other sub-building drainage, and at the discharge point by drainage from the parking lot. Due to the low level concentrations found in MW-1 and MW-2 over four

quarters and the location of the storm sewer beneath the building, it is not warranted or practical to drill and install monitoring wells beneath the building.

The low contaminant concentrations in question (MW-1 and MW-2 over four quarters of monitoring) from a potential release source more than 20 years old and the complicated groundwater flow pattern would support no further action regarding GSI.

Water samples were collected from the basin during four events and only Acenaphene was reported in one location above the GSI residential criteria. A subsequent sampling shows no compounds were present in the catch basin water. Secondly, Acenaphthene is typically not assocated with a gasoline UST release and is suspected to be from truck fuel leakage that may have occurred in the loading dock area adjacent to the parking garage entrance or from the asphalt matrix that covers a majority of the apron area. Water samples from the catch basin provide the best representation of any water quaility in the storm sewer because it is likely that additional foundation drains add to the dilution of contamnants in the groundwater being drained by the storm sewer in the apron area.

MDEQ Audit Finding #6:

• Because groundwater is less than three meters deep in MW-1 and MW-2, generic assumptions do not apply for the groundwater inhalation criteria. A Tier 2 analysis is needed.

Federal-Mogul Response:

Based upon the low levels reported in the former UST area, last sampling event, (MW-1), the following percents of the compounds detected with respect to the most strict residential criteria are shown. The maximum concentrations of each constituent detected in groundwater are less than 1 percent of their respective indoor air inhalation criteria. The data supports that a very limited mass of contamination exist and a Tier 2 evaluation is not warranted even if the groundwater was in direct contact to the ambient air.



				Sa	imple ID:	
Guidesheet Number		#4	#5	Collection Date/Tin		
				Sample Depth: Collection Method:		
Hazardous Substance	Chemical Abstract Service Number	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Site ID	Result	% of Cleanup Criteria
Acenaphthene	83329	4,200 (S)	4,200 (S)	FM Headquarters - 070197	1	.74%
Anthracene	120127	43 (S)	43 (\$)	FM Headquarters - 070197	.7	.28%
Benzene (I)	71432	5,600	35,000	FM Headquarters - 070197	.1	.02%
Benzo(a)anthracene (Q)	56553	NLV	NLV	FM Headquarters - 070197	.15	LV
Benzo(b)fluoranthene (Q)	205992	!D	ID.	FM Headquarters - 070197	.48	D
Benzo(a)pyrene (Q)	50328	NLV	NLV	FM Headquarters - 070197	.32	LV
Chrysene (Q)	218019	ID	ID	FM Headquarters - 070197	.33	D
Ethylbenzene (I)	100414	1.1E+5	1.7E+5 (S)	FM Headquarters - 070197		.0041%
Fluoranthene	206440	210 (S)	210 (S)	FM Headquarters - 070197	.8	.24%
Fluorene	86737	2,000 (S)	2,000 (S)	FM Headquarters - 070197	.6	.28%
Indeno(1,2,3-cd)pyrene (Q)	193395	NLV	NLV	FM Headquarters - 070197	.26	.20% LV
Isopropyl benzene	98828	56,000 (S)	56,000 (S)	FM Headquarters - 070197	.3	.02%
Lead (B)	7439921	NLV	NLV	FM Headquarters - 070197	.43	.02% LV
2-Methylnaphthalene	91576	ID	ID	FM Headquarters - 070197	0	
Naphthalene	91203	31,000 (S)	31,000 (S)	FM Headquarters - 070197		D 22%
Phenanthrene	85018	1,000 (S)	1,000 (S)	FM Headquarters -	9	.22%
n-Propylbenzene (I)	103651	ĮD.	ID	070197 FM Headquarters -	2	.20%
Pyrene	129000	140 (S)	140 (S)	070197 FM Headquarters -	.5	D
Toluene (I)	108883	5.3E+5 (S)	5.3E+5 (S)	070197 FM Headquarters -	.3	.93%
1,2,4-Trimethylbenzene (I)	95636	56,000 (S)	56,000 (S)	070197 FM Headquarters -		.0017% •
Xylenes (I)	400000=	1.9E+5 (S)	1.9E+5 (S)	070197	8	.50%
	1330207	\		FM Headquarters - 070197	2	.02%

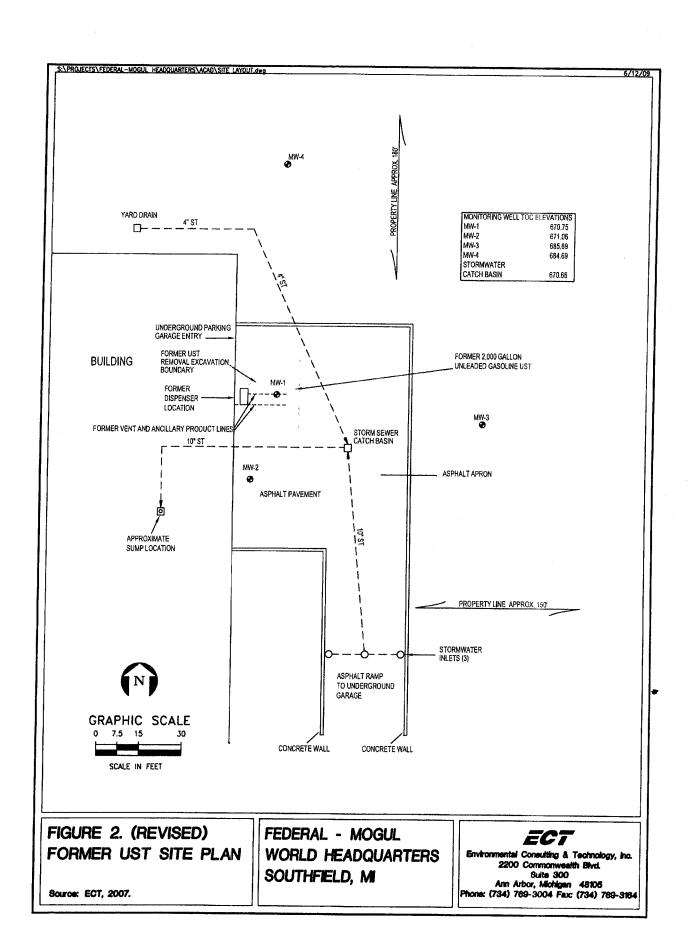
If you have any questions regarding this response, please don't hesitate to call. If there are still fundamental disagreements regarding whether this site can be "closed", an on-site meeting may be the best way to discuss/resolve the issues.

Sincerely,

John J. D'Addona, P.E.

Senior Engineer

C: Mark Bauer, Federal-Mogul



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – WASTE AND HAZARDOUS MATERIALS DIVISION PO BOX 30241, LANSING, MI 48909-7741, Phone 517-335-2690, Fax 517-335-2245, E-mail <u>DEQ-STD-TANKS@state.mi.us</u>

ELEASE REP	ORT: 🗌 SUSPE	CTED X CONFIR	MED			WHMD	USE O	NLY
THIS INFORMATION IS REQUIRED UNDER 1994 PA 451, AS AMENDED (Ad 451). FAILURE TO COMPLY WITH THE PROTHIS ACT MAY RESULT IN A MISDEMEANOR AND/OR CIVIL PENALTIES NOT TO EXCEED \$5000 PER DAY, PER TANK.				FACILITY NUMBER		ENTRY DATE		
INSTRUCTIONS: This form applies to releases of petroleum and hazardous substa			inces	UPGR	ADE	/CANCEL DATE	INCIDE	NT NUMBER
from underground storage tanks regulated under Part 211, Underground Storage T of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amen			Tanks,	ks,		TIME REPORTED		
(PA 451).				PERO	DTC	D.B.Y. C. DUONE C		OICE MAIL
The owner or operator must report suspected and confirmed releases to the Waste And Hazardous Materials Division (WHMD) within 24 hours of discovery. The report may be report may be reported by the confirmation of the confirma			made	= I		AR MAIL	FAX LI V	OICE MAIL E-MAIL
by a consultant on behalf of the owner/operator. Phone 1-800-MICHUST, FAX this form the WHMD web site www.state.mi.us/std. All			10 517-					
information on this form must be provided regardless of whether the release is reported by			by	Signat	ure			
telephone, FAX, or web fo	orm. For further information se	e Page 2.						
PERSON REPORTING RE	LEASE	COMPANY (IF NOT OWNER/O	OPERATOR)			ELEPHONE NUMBER	·· ······· ≳:	**
Mark Bauer		Bauer Environmenta	•			(248) 354-8912		
TANK REMOVAL CONTRA	CTOR	CONTRACTOR CONTACT				CONTRACTOR TELE	PHONE N	IUMBER:
N/A		N/A				() N/A		
20 1 m/g mm 1900, mm 1960mb 1970 mm 1961 1970 mm 1967 mm 1967 mm 1961 1961 mm	I. OWNERSHIP OF TANKS					II. LOCATION OF	TANKS	
•	ORATION, INDIVIDUAL, ETC.)	FACILITY N	NAME OF	COI	MPANY SITE IDENTIF	IER	
Federal-Mogul Co	orp.		Federa	l-Mogu	ıl I	World Headquar	rters	
STREET ADDRESS	17.		1	STREET ADDRESS (P O Box Not Acceptable)				
26555 Northweste	<u> </u>		 	vortnw	T	ern Highway		
CITY Southfield	STATE MI	ZIP CODE 48033	COUNTY Southfield Oakland			STATE MI	ZIP CODE 48033	
TELEPHONE NUMBER			TELEPHONE NUMBER					
248) 354-811	0		(248) 354-8912					
DATE RELEASE DISCOVERED: 4/5/07			CONTACT PERSON FOR LOCATION					
TIME RELEASE DISCOVERED: AM PM		Mark B	auer					
TANK NUMBER ¹ (if known)	Unknown							
SIZE OF TANK (gallons)	Unknown						-	
SUBSTANCE RELEASED	Gasoline			-				
CAUSE OF RELEASE	☐ Tank	☐ Tank	☐ Tank			☐ Tank		☐ Tank
(Check all that apply)	☐ Piping	☐ Piping	☐ Piping			☐ Piping		☐ Piping
	Spill Protection	Spill Protection	Spill Prot			Spill Protection		Spill Protection
	Overfill Protection	Overfill Protection	Overfill P			Overfill Protection	on	Overfill Protection
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HOW WAS LEAK	☐Tank Removal	☐Tank Removal		oval		Tank Removal		Comments) →
DETECTED (Check all that	☐ Inventory Records	☐ Inventory Records		☐ Tank Removal ☐ Inventory Records		☐ Inventory Records		☐ Inventory Records
apply)	Repairs	Repairs	☐ Repairs			Repairs		☐ Repairs
1, 2,	☐ Stained Soil	☐ Stained Soil	☐ Stained S	oil		☐ Stained Soil		☐ Stained Soil
	☐ Petroleum Odors	☐ Petroleum Odors	☐ Petroleun	n Odors		☐ Petroleum Odor	rs	☐ Petroleum Odors
	🖾 Analytical Data	☐ Analytical Data	☐ Analytical	Data		☐ Analytical Data		☐ Analytical Data
	☐ Free Product and/or Oil	☐ Free Product and/or Oil	☐ Free Prod	luct and/c	or Oil	☐ Free Product ar	d/or Oil	☐ Free Product and/or Oil
			Sheen in Gro	undwate	r	Sheen in Groundwa	ater	Sheen in Groundwater
COMMENTS (attach additional sheets if necessary):								
Froundwater samples obtained from within and just outside the former UST (removed prior to 1998)								
ackfill area exh	ibited low concent	rations of gasolin	e consti	tuents	s al	bove GSI and	drinki	ng water criteria
								_

DISTRIBUTION: WHMD, FACILITY FILE, DISTRICT OFFICE, OWNER

¹Copy this page for additional tanks if needed.

DEC 10 2015 PO BOX 30426, LANSING, MI 48909-7926 STAFF INITIALS CLOSURE REPORT COVER SHEET - 11 DISTRICT M REVISED PER DEQ AUDIT □ NEW or INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY pursuant to Part 213, Section 324.21312a of the Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Check one of the boxes above to indicate whether this is a new or revised submittal. The Owner/Operator (O/O) and Qualified Underground Storage Tank Consultant (QC) must complete the affidavits on page 2. Please submit the completed closure report cover sheet and Table of Contents (Form EQP4008) to the appropriate District Office. 5000 5609 FACILITY ID NUMBER: FEDERAL-MOGUL WORLD HEADQUARTERS SITE NAME: 26555 NORTHWESTERN HIGHWAY STREET ADDRESS: OAKLAND COUNTY: 48033 ZIP: CITY: SOUTHFIELD CONFIRMED RELEASE NUMBER(S): **APRIL 5, 2007** DATE(S) RELEASE(S) DISCOVERED: MarkT.Bauer2@FederalMogul.com O/O EMAIL ADDRESS: FEDERAL-MOGUL CORPORATION O/O NAME: ZIP: 48034 STATE: SOUTHFIELD 27300 WEST 11 MILE RD. FLOOR 8 CITY: O/O STREET ADDRESS: 248-354-9499 FAX: 248-354-8912 PHONE: MARK BAUER CONTACT PERSON: Permission is given for the Department of Environmental Quality to contact the Qualified Consultant: ⊠YES □NO CLOSURE REPORT INFORMATION: Answer All Questions (DO NOT LEAVE BLANKS) ☐ Tier II Type of RBCA Evaluation: X Tier I 4 .. Previous Site Classification (1-4): 1. Site Classification (1-4): Substance(s) released:
 ☐ Gasoline ☐ Diesel ☐ Ethanol: E-10 🔲 Has contamination migrated off-site above Tier 1 Residential RBSLs? ☐YES ☒NO If YES, have off-site impacted parties been notified per Section 21309a(3) of Part 2137 TYES NO Depth to groundwater: 4. Predominant groundwater flow direction: Southwest Is mobile NAPL present: Currently? ☐YES ☒NO Previously? ☐YES ☒NO If present, was it recovered? TYES NO If recoverable, total gallons recovered since last reported: to date: 6. Was migrating NAPL present?: ☐YES ☒NO If yes, were actions taken to stop the NAPL migration? ☐YES ☐NO gallons of groundwater remediated: Since Last Report: cubic yards of soil remediated: gallons of groundwater remediated: Totals to date: cubic yards of soil remediated: 0 8. Have toxic or explosive vapors been identified in any confined spaces (basement, sewer, etc.)? ☐YES ☑NO Previously: ☐YES ☑NO 9. Drinking water supply effected? Currently: ☐YES ☒NO ☐ Municipal # ☐ Public Type II/III # Indicate type and # of wells effected:
Private # 10. Has the release affected surface water or wetlands? ☐YES ☒NO >1 MILE 11. Estimated distance and direction from point of release to nearest: Private well: > 1 MILE Municipal well: Is site within a wellhead protection zone? ☐YES ☐NO > 1 MILE Surface water/wetland: 12. Closure report based on which type of land use? ⊠Residential □Nonresidential

14. What type of Corrective Action was Completed? (i.e., Air Sparge/Soil Vapor Extraction; Monitored Natural Attenuation; Multi-phase Extraction; Excavation; Institutional Controls; etc.): UST system removal, followed by site characterization and monitored natural

13. Institutional Controls: ☐None ☐Notice of Corrective Action ☐Restrictive Covenant ☐Other:

attenuation.

Page 1 of 2 EQP4452 (Revised 8/13)

DATE ENTERED INTO DATABASE

KR.J. SEMI DISTRICT

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION AND REDEVELOPMENT DIVISION
DEC 10 2015 LEAKING UNDERGROUND STORAGE TANK

CLOSURE REPORT COVER SHEET

(continued)

	-				
CLOSURE REPORT AFFIDAVITS: (Must be completed before submitting form.)					
OWNER/OPERATOR AFFIDAVIT OF REPORT COMPLETENESS					
I attest that the information upon which knowledge, in accordance with Part 2 Environmental Protection Act, 1994 P.	13, Leaking U	Inderground Storage Tank	te and true to th s, of the Natural	e best of my Resources and	
Molt Ban	Mark Bauer		12-1-15		
Signature of Owner or Operator / A	ffiant	Print Owner or Operator	Affiant Name Date		
Federal-Mogul Corporation 27300 West 11 Mile Road, Floor 8, Southfield, Michigan 48034				4	
Name of Company (if applicable)	Address, City, State, Zip				
248-354-8912	248-354-9499		MarkT.Bauer2@FederalMogul.com		
Phone Number		Fax Number	Em	ail Address	
Sworn to before me and subscribed in my presence this			JACQUELINE MARASCO Notary Public, Macomb County, MI Acting In		
OHALIEIED HINDERGE	OUND STOPA	GE TANK CONSULTANT AFF	IDAVIT OF CLOSE	IDE	
As preparer of the Closure Report, I attest to the fact that the corrective actions detailed in the closure report complies with all applicable requirements under the applicable Risk Based Corrective Action standard and that the information upon which the closure report is based is true and accurate to the best of my knowledge. By signing this form I certify that I meet the qualified underground storage tank consultant requirements identified in section 324.21325 of Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Attached is a Certificate of Insurance demonstrating that I have obtained the insurances required by sections 324.21312a(1)(c) and 324.21325.					
John FD'adden P.E.		JOHN J. D'ADDONA, P.E.		12-1-15	
Signature of Qualified UST Consu	tant Print Qualified QC Consultant Name			Date	
ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC	2200 COMMONWEALTH BOULEVARD, SUITE 300, ANN ARBOR, MI 48105				
Name of Company	Address, City, State, Zip				
734-769-3004	734-769-3164		JDADDONA@ECTINC.COM		
Phone Number		Fax Number	il Address		
Sworn to before me and subscribed in my pre VONULUM Now Motary Public County of Washfenaw	<u>l</u> _	TENP	OILLE M NEWSOME Public, State of Michigan ounty of Washinster writesion Expires Feb. 15, 2018 the County of Washinster	naw	
Acting in the County of					

INTRODUCTION

On behalf of Federal-Mogul Corporation (Federal-Mogul), Environmental Consulting & Technology, Inc. (ECT) has prepared this Tier I restricted residential Closure Report for the former Federal-Mogul World Headquarters leaking underground storage tank (LUST) site (Facility ID 00007607) located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan (Site). A Site Location Map is provided as Figure 1 in Appendix A. The locations of former UST system components are shown in Figures 2 and 3 in Appendix A.

By email dated April 27, 2015, MDEQ confirmed that the GSI pathway is not complete at the Site (and thus is not relevant for closure analyses) (See Appendix B). As described in detail below, the drinking water pathway is the only potentially complete exposure pathway at the Site. Analytical results demonstrate that the groundwater concentration of only a single compound, 1,2,4 Trimethylbenzene (1,2,4-TMB), at a single location (MW-1), exceeds the drinking water Cleanup Criterion for either Residential or Non-Residential use. Although the Site currently is zoned for non-residential use, nearby properties are used for residential purposes and it is possible that zoning of the Site might be changed in the future to allow residential use. Therefore, in order to allow for the greatest potential future use of the Site, a Restricted Residential Closure is proposed.

The record of this matter shows that, in response to a release of gasoline discovered on April 5, 2007 at a former underground storage tank (UST) location at the Site, eleven (11) soil borings were completed and six (6) groundwater monitoring wells were installed to assess the presence or absence of light non-aqueous phase liquid (LNAPL) and to delineate the lateral and vertical extent of soil and groundwater impacts. Groundwater is present immediately below the pavement and aggregate base material in the area of the release, and subsurface evaluation activities indicate that residual LNAPL is not present in the subsurface. Furthermore, analytical testing of groundwater samples has demonstrated that the vertical and horizontal extent of groundwater impacts have been delineated and periodic groundwater monitoring has demonstrated that the dissolved phase groundwater plume is stable. Remaining subsurface impacts are confined to a very small area near the former UST at the Site. This is shown in Figure 4 of Appendix A. There are no complete exposure pathways as the Site is currently configured and with the recording of land and resource use restrictions, the potential for exposure to the remaining petroleum impacts will be prevented.

The results of the historical evaluations at the Site have been described in detail in previous reports submitted to the Michigan Department of Environmental Quality (MDEQ) including ECT's July 2, 2012 Revised Closure Report (CR) and July 17, 2014, Additional Investigation Summary Report. This Closure Report has been prepared in general accordance with the "Closure Report Table of Contents," (EQP4008, 1/13) format and presents an updated conceptual site model (CSM), an exposure pathway evaluation and land and resource use restriction documentation.

1.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES AND DOCUMENTATION OF THE BASIS FOR CONCLUDING THAT CORRECTIVE ACTIONS HAVE BEEN COMPLETED

The following sections summarize corrective action activities and provide the documentation that is the basis for concluding that corrective actions have been completed and a Tier I restricted residential closure is appropriate.

1.1 Summary of Current and Completed Corrective Action Activities

A 2,000-gallon capacity gasoline underground storage tank (UST) was removed from the site in 1986 prior to the enactment of federal and state UST legislation in 1987. The UST was used for fueling executive fleet vehicles at the Federal-Mogul Headquarters. The former fueling area is located in a paved area at the bottom of a long descending ramp just outside the underground parking area approximately 15 feet below the surrounding land surface. Groundwater is generally encountered less than one-foot below the pavement at the base of the ramp. A catch basin is located in the vicinity of the former UST system to collect storm water and snow melt. Storm water is directed from the catch basin to a sump inside the underground parking area. The location of the former UST system components (tank, piping, and dispenser) and storm water collection system are shown in Figure 2 of Appendix A. The approximate locations of the former UST system components correspond to areas of patched pavement as shown on the photograph presented as Figure 3 of Appendix A.

Review of analytical laboratory testing results obtained during environmental due diligence activities in June 2006, identified evidence of a release in one soil sample and one groundwater sample collected in the immediate vicinity of the former UST. The soil sample was collected below the depth of saturation and the groundwater sample was collected using a temporary well. As the soil sample was saturated, the results have only been used to qualitatively assess for the presence of a petroleum source such as LNAPL.

During March 2007, four permanent monitoring wells were installed in the area of the former UST system and groundwater samples were collected using low flow sampling techniques. A release (Leak ID C-0080-07) of gasoline was confirmed on April 5, 2007, based on review of laboratory testing results of groundwater samples collected from newly installed monitoring wells. The release was identified in the immediate vicinity of the former UST.

Documentation for the disposal of impacted media during UST system removal is not available. During the 2007 sampling event, groundwater was present at approximately 0.5 feet below the pavement surface and no impacted, unsaturated soil was identified. The estimated remaining volume of impacted media is approximately 130 cubic yards in the immediate vicinity of the former UST. However, as indicated in Section 2.1.1, delineation and monitoring activities indicate that the constituents of concern (CoC) concentrations in affected media have reached equilibrium conditions and pose no exposure risk for existing and planned site use.



1.1.1 Delineation and Monitoring Activities

Initial site characterization activities were completed by Soil and Materials Engineers, Inc. (SME) during June 2006. SME's findings were presented in a November 22, 2006 Phase II Environmental Assessment (ESA) report which has been previously submitted to the MDEQ:

Between March 2007 and November 2013, ECT conducted multiple subsurface investigations to characterize and delineate the extent of media impacted by the release and address MDEQ report audit comments. The characterization and delineation activities were documented in the following ECT reports and MDEQ responses which are on file with the MDEQ:

 August 2, 2007 	Initial Assessment Report (ECT)
 October 22, 2008 	Closure Report (ECT)
 April 27, 2009 	Audit Response (MDEQ)
 May 12, 2011 	Closure Report (ECT)
 November 3, 2011 	Audit Response (MDEQ)
 July 2, 2012 	Revised Closure Report (ECT)
 October 3, 2012 	Denial of Closure Report (DEQ)
 November 9, 2012 	Additional Investigation Work Plan (Federal-Mogul)
 December 6, 2012 	Work Plan Approval (MDEQ)
 April 12, 2013 	Storm Sewer System Study Work Plan (ECT)
 April 17, 2013 	Approval of Storm Sewer System Study Work Plan (MDEQ)
• June 4, 2013	Approval of Revised Storm Sewer System Study Work Plan (MDEQ)
 July 17, 2014 	Additional Investigation Summary

During a June 2006 Phase II ESA, SME completed four soil borings, SP-1 through SP-4 for the collection of soil samples for field screening and, at one location, analytical laboratory analyses. Groundwater samples were collected using temporary wells installed at each boring location. SME targeted potential source areas associated with the former UST, dispenser and piping. The soil and groundwater samples were submitted to an analytical laboratory for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs) and lead analyses. LNAPL was not identified in the temporary wells during the assessment. However, gasoline constituents were identified in one of three groundwater samples at concentrations that exceeded applicable Part 213 residential and nonresidential risk based screening levels (RBSLs). The groundwater sample was collected at the location of the former UST. Analysis of a saturated soil sample collected from this same location indicated that residual LNAPL was not present. The locations of the SME soil probes are depicted in Figure 2 of Appendix A. Boring logs for SP-1 through SP-4 are included in Appendix C.

During March 2007, ECT installed four groundwater monitoring wells, MW-1 through MW-4, to delineate groundwater impacts identified during initial site characterization. During drilling, one deep soil sample was collected to vertically delineate soil impacts at MW-1. Groundwater samples were collected at four wells and a storm water sample was collected from the storm water catch basin. The soil and the groundwater samples were submitted to an analytical laboratory for benzene, toluene, ethylbenzene, and xylenes (BTEX), isopropylbenzene, n-propylbenzene, methyl(tert)butyl



ether (MTBE), trimethylbenzene isomers, PAHs and lead analyses. One additional soil sample was submitted to the laboratory for BTEX, MTBE and ignitability analyses. Groundwater impacts above Part 213 nonresidential RBSLs were confirmed, but indicated to be limited in extent. The previously identified soil impact was vertically delineated to Part 213 generic nonresidential and residential RBSLs. Concentrations of PAHs detected in the catch basin did not exceed Part 213 generic nonresidential or residential RBSLs. Boring logs and monitoring well construction summaries for MW-1 through MW-4 are included in Appendix C.

In response to a denial of the Closure Report on October 2, 2012, Federal-Mogul and ECT met with MDEQ on November 1, 2012 to discuss data gaps that still existed and that prevented the closing of the UST release site. A work plan for additional investigation was completed and submitted to MDEQ on November 9, 2012. MDEQ approved the work plan on December 6, 2012. In January 2013, ECT completed one additional soil boring, SB-1, and installed two additional groundwater monitoring wells, MW-5 and MW-6 at the Site to evaluate the significance of previous field screening of soil and to further evaluate for the presence of dissolved phase CoCs between MW-1 and MW-2. ECT collected an unsaturated soil sample from below the pavement at SB-1. ECT also collected groundwater samples from each monitoring well and a sump within the building, southeast of the former UST system. The soil and groundwater samples were analyzed for leaded and unleaded gasoline UST VOCs and PAHs. The analytical testing results demonstrated that CoCs are not migrating downgradient and both soil and groundwater impacts are confined to the immediate vicinity of monitoring well MW-1.

During the period of June through November 2013, ECT completed an evaluation of the storm sewer system in compliance with a MDEQ approved work plan. The evaluation included the collection of dry and wet weather samples from the storm water catch basin, basement sump, and various storm water conveyance pipes in connection with the sump. Storm water samples were analyzed for the leaded and unleaded gasoline UST VOCs, PAHs and lead. The storm sewer sampling study demonstrated that the release from the former UST system is not migrating to the storm water collection system. Compositionally, hydrocarbons that were detected in the storm water collection system are indicative of PAHs associated with urban storm water.

Since 2007, there have been seven groundwater sampling events (March 2007, September 2007, January 2008, April 2012, January 2013 and November 2013). The laboratory testing program for the 2012 and 2013 sampling events was expanded to include all of the leaded and unleaded gasoline VOC constituents. Historically, CoCs have only been identified at MW-1 and MW-2. CoCs concentrations in groundwater samples collected from MW-1 have remained stable over time. CoCs concentrations in groundwater samples collected from MW-2 have decreased to non-detectable levels over time. The concentrations of naphthalene, 1,2,4-TMB, xylenes, fluoranthene and phenanthrene in the most recent groundwater sample collected from MW-1 (November 2013) exceeded the Part 213 drinking water and/or groundwater/surface water interface (GSI) RBSLs. However, the MDEQ has affirmed that from a Part 213 perspective, the storm water collection sump is the compliance point for the GSI pathway and the water samples that were collected from the sump and inlet piping did not contain petroleum VOC compounds that are prevalent in groundwater samples from MW-1. Therefore, the GSI pathway is not complete with respect to the Part 213 release.

1.2 Chemical(s) of Concern (CoC), Source Location(s) and Remaining Maximum Concentrations in Soil and Groundwater

The former UST system was only used to store and dispense gasoline. SME initially analyzed soil and groundwater samples for the full VOC scan, PAHs and lead. Based on a review of SME's initial full VOC analyses, ECT initially submitted soil and groundwater delineation and verification samples to an analytical laboratory for unleaded gasoline VOCs using US EPA Method 8260, PAHs using US EPA Method 8270 and lead using US EPA Method 6020. Based on MDEQ audit comments, ECT subsequently revised the analytical testing program to include both leaded and unleaded gasoline VOCs using US EPA Method 8260.

The following CoCs were detected in unsaturated soil and groundwater samples during assessment and verification sampling completed by ECT beginning in 2007:

СоС	UNSATURATED SOIL	GROUNDWATER	STORM WATER
Benzene		X*	
sec-Butylbenzene			<u> </u>
n-Propylbenzene	- - -	<u>X*</u>	·
Ethylbenzene		X*	-
Toluene		X*	
1,2,4-Trimethylbenzne		X	-
1,3,5-Trimethylbenzene		X*	
Xylenes		X	
Naphthalene	X**	X	·
2-Methylnaphthalene	· · ·	X*	
Acenaphthene		X*	-
Fluorene			_
Phenanthrene	X*	X	X
Anthracene			
Fluoranthene	X*	<u> </u>	X
Pyrene	X*		X*
Benzo(a)anthracene	<u>" " " </u>		X*
Chrysene		 -	<u>X</u>
Benzo(b)fluoranthene	1		X
Benzo(a)pyrene	 	-	X
Benzo(g,h,i)perylene	· ·	· · ·	<u>X</u>
Benzo(k)fluoranthene			X
Indeno(1,2,3-cd)pyrene			X
Lead	X*	X*	X

^{*}Maximum detected concentration does not exceed Part 213 Tier I Residential and Nonresidential RBSLs



^{**}Naphthalene exceeds Part 213 Tier I Residential and Nonresidential RBSL for GSI. However, GSI pathway is incomplete (see subsections 1.7.3 and 1.8).

Analytical laboratory testing results for soil samples collected by ECT are summarized in Table 1 of Appendix D. Maximum CoC concentrations detected in soil samples are summarized in Table 2 of Appendix D. Review of analytical laboratory testing results combined with a review of field photoionization detector (PID) screening results indicates that the source of the release is from the immediate vicinity of the former UST. This area is shown in Figure 2 of Appendix A.

Analytical laboratory testing results for groundwater samples collected by ECT are summarized in Table 3 of Appendix D. Maximum CoC concentrations detected in groundwater samples are summarized in Table 4 of Appendix D. As shown in Figure 2 of Appendix A, the source of the dissolved phase groundwater plume at the Site corresponds to a historical release from the vicinity of the former UST.

1.3 Remaining Non-aqueous Phase Liquid (NAPL)

Measurable thicknesses of LNAPL have not been identified in any monitoring well installed at the Site in the eight years since the release was reported. No exceedances of aqueous solubility were reported for any groundwater sample collected from any of the monitoring wells during groundwater monitoring completed over the course of eight years. This finding is sufficient to demonstrate that no mobile, migrating or recoverable LNAPL is present at the Site. These findings also indicate that a source area of residual LNAPL saturation is not present. This finding is strengthened by a review of maximum concentrations of CoCs in soil samples combined with field PID screening of saturated soil samples which did not identify soils with residual LNAPL saturation. The conceptual site model (CSM) for the release suggests that prior to UST system removal, a limited volume of soil in the immediate vicinity of the UST was impacted by released gasoline. The estimated volume of remaining impacted media is approximately 130 cubic yards in the immediate vicinity of the former UST, or approximately 195 tons.

1.4 Human and Environmental Receptor Locations that Could be Impacted

The extents of soil and groundwater impacts are depicted in plan view in Figure 2 of Appendix A. ECT also prepared a cross section created along the axis of the dissolved phase groundwater plume as shown in Figure 4 of Appendix A. The cross section, A-A', is presented as Figure 5 of Appendix A. The area of impacted soil and groundwater is located in the paved, below grade basement garage entrance at the northeast corner of the existing building on the Site. The soil and groundwater impacts are confined to an approximately 1,000-square foot area on the Site. An evaluation of human and environmental receptor locations that could be impacted is influenced by the following:

- The Site and surrounding areas are served by municipal water supply;
- The area of release is covered with surficial concrete pavement;
- The area of remaining soil and groundwater impacts is in an unoccupied drive into a basement parking area which will remain an unoccupied area for the foreseeable future;
- A comprehensive storm sewer study has demonstrated that existing storm sewers in the
 vicinity of the release are not serving as preferential migration pathways to a surface water
 body or sensitive environmental receptor;
- There is no mobile, migrating or recoverable LNAPL in the subsurface.



Although there are no human or environmental receptors associated with the release, without land and resource use restrictions, the following human and environmental receptors could exist at the Site:

- Potential drinking water exposures could occur if a potable water well is installed in the area
 of the soil and groundwater impacts. There are no plans to install a potable water well at the
 Site.
- Improper relocation of excavated soil or dewatering fluids in the area of impacts could affect sensitive environments. No relocation of excavated soils or dewatering is planned.

Foreseeable exposures to each of above described human or environmental receptors will be prevented by adherence to the stipulated conditions of the restrictive covenant described in this Closure Report.

1.5 Identification of Complete Transport and Exposure Pathways

There are no complete transport or exposure pathways associated with the release. As presented in Section 2.4, potential transport or exposure pathways will be prevented by adherence to the stipulated conditions of the restrictive covenant described in this Closure Report.

1.6 Identify Current or Potential Future Use of the Site and Surrounding Land, and of the Groundwater, Surface Water, and Sensitive Habitats

The area of the Site where the release occurred is currently and for the foreseeable future developed as a basement parking area. The Site is zoned ERO + Education Research - Office (Limited) and is located in a commercially developed area at the intersection of Lahser Road and Northwestern Highway in the City of Southfield. Figure 6 of Appendix A is the City of Southfield Zoning Districts map. Commercially zoned properties are located to the north, east and west. Residential properties are located to the south. It might be possible for the zoning of the Site to be changed in the future to allow for residential use.

The Site is located in the Rouge River watershed which is within the Lake Erie basin. The nearest surface water body is a small creek which is a tributary to the Rouge River. The creek at its nearest point is located over 1,200 feet east of the area of the release (refer to Figure 1).

The Site and surrounding properties are served by the Southeastern Oakland County Water Authority which is supplied by the city of Detroit Water and Sewerage Department. The 2014 Water Quality Report for the city of Southfield is included in **Appendix E**. There are no known municipal or private water wells within a mile of the Site. The city of Southfield does not have a delineated well head protection area. There are no known water wells within a 1-mile radius of the Site.

1.7 Final LNAPL Conceptual Site Model (LCSM)

The results of historical evaluations described in Section 2.1 have provided the basis for a thorough understanding of the LCSM. This section presents a summation of the Site hydrogeology, the



location and volume of remaining impacted media, and exposure pathways associated with the fate and transport of released gasoline LNAPL.

To assist in this discussion of the LCSM, ECT has prepared Figure 4 of Appendix A which depicts the lateral extent of groundwater impacts above Tier I nonresidential or residential risk based screening levels (RBSLs). Figure 5 of Appendix A is a cross section depicting subsurface conditions and representative analytical laboratory groundwater testing results. Figure 5 depicts the vertical extent of groundwater impacts above Tier I nonresidential or residential RBSLs. Field observations combined with soil and groundwater analyses indicate that source material containing residual LNAPL saturation is not present.

1.7.1 Hydrogeology

The hydrogeology at the Site has been described in detail in the reports referenced in Section 2.1.1. Soil boring logs depicting subsurface conditions are included as Appendix C.

Soil Conditions

As shown in Figure 5, soil conditions below surficial paving materials, in the vicinity of the former UST system generally consists of 1.5 to 3 feet of sand fill underlain by silt to depths ranging from 9 to 10 feet below grade. At boring locations completed within the former UST excavation, the sand fill was encountered to depths of 8 feet below grade. The silt was underlain by natural silty clay to the explored depth of 20 feet below grade. Monitoring wells MW-3 and MW-4 were installed at an approximately 15 foot higher elevation in landscaped areas outside and, respectively to the east and north of the drive into the basement garage. At these locations, topsoil was underlain by sand to depths ranging from 14.5 to 17 feet below grade. The sand was underlain by silt to the explored depths of the borings which was 22 feet below grade.

The entire soil column at each of the eleven borings completed to characterize the release was described by environmental professionals and screened using a calibrated PID. At MW-1, completed at the approximate center of the former tank cavity, odors and staining were reported from below the pavement to a depth of 8 feet below grade. Corresponding PID readings ranged from 160 to nearly 10,000 ppm (<9,999 reported). At SP-4, completed southeast of the UST tank cavity, SME reported odors from below the pavement to a depth of 2 feet below grade. SME reported a corresponding PID reading of 36 ppm. No evidence of petroleum impacts were observed by ECT in the unsaturated or saturated soil column at the remaining nine boring locations.

Groundwater Conditions

Groundwater was encountered within the sand fill immediately below the pavement in the area of the former UST system (MW-1, MW-2, MW-5 and MW-6). At MW-3 and MW-4, installed in landscaped areas at an elevation that is approximately 15 feet higher than the drive into the basement garage, groundwater was encountered within the lower portion of the sand strata and within and upper portion of the natural silt stratum. No petroleum sheens were observed in groundwater samples collected from the monitoring wells. During sampling a faint petroleum odor was observed in the groundwater samples collected from MW-1. No other odors were observed in groundwater samples collected at the remaining well locations.



Groundwater elevations calculated from groundwater measurements collected during seven groundwater monitoring events indicate that groundwater flows to the southwest in the area of the former UST system. Figure 7 of Appendix A depicts groundwater elevation contours calculated for September 2007. As shown in Figure 7, groundwater a gradient of 0.05 ft/ft was calculated which is typical for the monitoring events. As indicated in the following section, groundwater flow is affected by drains and a sump installed below the pavement of the basement garage. The drains reduce hydrostatic pressure under the floor slabs of the basement parking garage and associated drives. On one occasion, the hydraulic head at MW-1 rose above the elevation of the below-grade well casing.

Storm Water Conveyances

There is a storm water catch basin located southeast of the former UST system (refer to Figure 2). The catch basin is 3.5 feet deep and the water level measured in the catch basin during assessment activities was approximately 3 feet. Drains beneath the pavement direct groundwater to this catch basin where the collected water flows via piping to a sump in the building that in turn pumps the collected water to the storm sewer system in the parking area south of the building. Storm water from the parking area, including the sump water, flows southeast approximately 1 mile where it discharges to an open drain. The locations and orientations of the sub-pavement drains are not shown on available construction prints.

As concluded in the storm water study described in greater detail in Section 2.7.4 and Appendix F, analytical testing has demonstrated that water entering the collection system at the catch basin and accumulating in the sump is not impacted by the UST release.

1.7.2 Residual LNAPL Saturation

Measurable thicknesses of LNAPL have not been identified in any monitoring well installed at the Site in the eight years since the release was reported. No exceedances of aqueous solubility were reported for any groundwater sample collected from any of the monitoring wells during groundwater monitoring completed over the course of eight years. This finding is sufficient to demonstrate that no mobile, migrating or recoverable LNAPL is present at the Site. These findings also indicate that a source area of residual LNAPL saturation is not present. This finding is strengthened by a review of maximum concentrations of CoCs in soil samples combined with field PID screening of saturated soil samples which did not identify soils with residual LNAPL saturation. The conceptual site model (CSM) for the release suggests that prior to UST system removal, a limited volume of soil in the immediate vicinity of the former UST was impacted by released gasoline.

1.7.3 Extent of Remaining Soil Impacts

The maximum concentrations of CoCs reported for soil samples collected during site evaluation are shown in the attached Table 2 of Appendix D. Due to the presence of groundwater immediately below the pavement in the area of the former UST system, limited soil sampling was completed. CoCs were only detected at concentrations exceeding Part 213 generic nonresidential or residential RBSLs in one soil sample (SB-1) collected in the vicinity of the former UST excavation. No other RBSLs for naphthalene and other CoCs for other exposure pathways were exceeded.



In the SB-1 sample, the concentration of naphthalene exceeded the Part 213 generic GSI protection RBSL. However, as more fully explained in Section 1.8, subsequent sampling in the downgradient monitoring wells MW-2, MW-5 and MW-6 indicates that naphthalene is limited in extent and GSI is an incomplete pathway. The extent of soil impacted with CoCs at concentrations exceeding Part 213 nonresidential and residential RBSLs is limited to the immediate vicinity of the former UST.

1.7.4 Extent of Remaining Groundwater Impacts

The maximum concentrations of petroleum hydrocarbon CoCs reported for groundwater samples collected during plume monitoring are shown in the attached Table 4 of Appendix D. During the most recent groundwater monitoring, Part 213 Tier I nonresidential or residential RBSLs were only exceeded at MW-1. The concentrations of these CoCs exceeded Part 213 generic nonresidential or residential drinking water (DW) and/or generic GSI criteria. Lead was intermittently detected in groundwater samples collected from MW-2 and MW-4 at concentrations above the Part 213 nonresidential or residential drinking water criterion. The extent of groundwater impacted with CoCs at concentrations exceeding Part 213 nonresidential or residential has been delineated. The impacted groundwater has not migrated downgradient to monitoring wells MW-5 and MW-6 (refer to Figure 4) and is confined to the immediate vicinity of the former UST excavation. The impacted groundwater encompasses an estimated area of approximately 1,000- square feet.

The attached Figures 8 and 9 of Appendix A depict the trends in total VOCs and PAH concentrations in groundwater samples collected from MW-1 and MW-2. As shown in Figures 8 and 9, total VOCs and PAHs concentrations have decreased over time confirming that the dissolved phase plume is contracting.

During 2013, a thorough storm water study was completed which identified petroleum hydrocarbons in storm water samples collected from catch basins and the sump in the vicinity of the release. Water samples were collected during both wet and dry weather periods. The analytical testing results for the storm water study are summarized in Table 5 of Appendix D. As shown in Table 5 and the summary table in Section 2.2 of this report, VOCs indicative of a gasoline release have not been detected in the storm water conveyances samples. The PAHs detected in the storm water conveyances have a different composition than the PAHs detected in groundwater samples collected from the monitoring wells. The PAHs in the storm water conveyances consist of the heavier combustion byproducts (i.e., benzo(a)anthracene, benzo(a)pyrene, etc.) which are indicative of urban storm water while the PAHs in the groundwater samples consist of the lighter more soluble constituents (i.e., fluoranthene, naphthalene, 2-methlynaphthalene and phenanthrene).

1.8 Summarize and Discuss the Risk Assessment and RBCA Tier Evaluation

Figure 10 of Appendix A is an Exposure Pathway Flowchart prepared in accordance with the Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites (ASTM E1739-95, reapproved 2010). Figure 10 provides a summary of the results of the RBCA evaluation and the methods which will be undertaken to assure that there are no future adverse exposures to the remaining impacted media. As presented in Figure 10 and described in the pathway-specific summaries provided below, a thorough pathway exposure evaluation has been completed.

• GSI: Soil and groundwater samples collected from the immediate vicinity of the former



UST system contain CoCs at concentrations exceeding the Part 213 generic GSI. However, analyses indicate that the soil and groundwater impacts are limited in extent and do not reach storm water conveyances that discharge to surface water. The 2013 storm water study demonstrated that the PAHs in the storm water are compositionally distinct from the PAHs in the impacted groundwater collected from the vicinity of the former UST system. Based on the results of the release characterization and the storm water study, the remaining contamination associated with the release is not judged to pose a risk to a surface water receptor. The storm water study is attached as Appendix F.

- Groundwater Ingestion: The Site and surrounding areas receive potable water from the city of Southfield. Although CoC concentrations in groundwater exceed Part 213 generic nonresidential or residential drinking water RBSLs, the extent of the impact has been delineated and does not extend offsite or vertically through a clay confining unit. Future ingestion of the remaining impacted groundwater can be prevented by land and resource use restrictions which prohibit the installation of water wells on the Site.
- Dermal Contact: Detectable concentrations of CoCs in soil are confined to the immediate
 vicinity of the former UST excavation and do not exceed dermal contact criteria.
 Nevertheless, precautions will be taken to prevent future dermal contact exposures during
 subsurface utility maintenance work. Analytical testing results will be provided to utility
 contractors so that appropriate health and safety procedures can be put in place.
- Inhalation: Detectable concentrations of CoCs in soil and groundwater are confined to the immediate vicinity of the former UST excavation and do not exceed ambient or indoor air inhalation criteria. Furthermore, the presence of mobile, migrating or recoverable LNAPL is not indicated by laboratory analyses or observations. Nevertheless, precautions will be taken to prevent future inhalation exposures during subsurface utility maintenance work. Analytical testing results will be provided to utility contractors so that appropriate health and safety procedures can be put in place.

Although there are currently no complete exposure pathways associated with the remaining hydrocarbon impacted media, land and resource use restrictions will be recorded to assure the prevention of future exposures.



2.0 CLOSURE VERIFICATION SAMPLING RESULTS

The following sections describe the results of verification sampling that demonstrate the current conditions at the Site satisfy the requirements of a Tier I restricted residential closure.

2.1 Summary of Analytical Data and RBSLs Used

A summary table of the soil quality analytical results from the investigative sampling activities including; sample identification, sample depth, date of collection, and analytical method is presented as Table 1 of Appendix D. A summary table of the groundwater quality analytical results from the investigative and verification sampling activities including; sample identification, screened interval, date of collection, and analytical method is presented as Table 3 in Appendix D. A summary table of the storm water quality analytical results from the investigative sampling activities including; sample identification, date of collection, and analytical method is presented as Table 5 in Appendix D. All soil, groundwater and storm water analytical laboratory reports and associated chain-of-custody and laboratory quality control/quality assurance (QA/QC) documentation has previously been submitted to the MDEQ.

2.1.1 Soil Sampling Methods and Results

ECT soil samples were analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases. Due to the high water table, only limited analyses of soil samples were completed to characterize the release.

On this project, field screening of soils was used as a supplement to analytical laboratory testing. In the field, retrieved soil samples were collected in continuous increments and field-screened utilizing a calibrated photoionization detector (PID) to provide a line of evidence for assessing residual LNAPL saturation. PID screening responses for each interval retrieved is provided on the individual soil boring logs.

The maximum concentrations of CoCs reported for soil samples collected during site evaluation are shown on the attached Table 2 of Appendix D. The maximum concentrations of the CoC naphthalene in one soil sample collected from the immediate vicinity of the UST excavation exceeded the Part 213 generic GSI RBSLs. No other RBSLs were exceeded. The volume of impacted soil is limited to the immediate vicinity of the former UST. The entire site will be restricted for drinking water use to provide a reliable method of preventing future exposures to the remaining CoCs.

2.1.2 Groundwater Sampling Methods and Results

A quarterly groundwater monitoring program was instituted from March 2007 through April 2008 to establish verification of groundwater quality beneath the Site and account for seasonal variations in the water table. Additional groundwater monitoring events were completed during 2012 and 2013 to confirm the previous groundwater monitoring results. Groundwater verification samples were analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases. Based on November 2013 groundwater monitoring event, dissolved VOC

contaminants associated with the release are only present at levels exceeding the Part 213 nonresidential or residential DW and GSI RBSLs at MW-1. The maximum concentrations of CoCs reported for groundwater samples collected during plume monitoring are shown in the attached Table 4. The estimated area encompassed by the impacted groundwater is approximately 1,000 square feet.

Although DW and GSI RBSLs are exceeded on-site, analytical results from the past 8 years indicate that the dissolved phase hydrocarbons are decreasing over time (refer to Figures 8 and 9) and have migrated less than 100 feet from the point of the release. The attached Figures 8 and 9 depict the decrease in total VOCs and PAHs concentrations in groundwater samples collected from MW-1 and MW-2. As shown in Figures 8 and 9, total VOCs and PAHs concentrations have decreased over time confirming that the dissolved phase plume is contracting.

In addition to groundwater, a thorough evaluation of the water quality in storm water conveyances has been performed (refer to Appendix F). This evaluation has demonstrated that the petroleum hydrocarbons associated with the release are not discharging to the storm water management system.

Existing groundwater monitoring wells will be abandoned after receipt of MDEQ approval of this Closure Report. Abandonment will include removal of the flush-mount well guards and placement of hydrated bentonite in the in-place wells. The abandoned wells will be capped with a one-foot thick concrete seal.

2.2 Required Maps and Figures

In accordance with the Closure Report Table of Contents (EQP4008, revised 1/13), ECT has prepared the required maps and figures necessary to demonstrate that closure verification sampling has been completed. These maps and figures are described in the following sections.

2.2.1 Site Map

Figure 1 of Appendix A depicts the Site location in relation to roads, railroads and surface water bodies. Figure 6 of Appendix A depicts the land use of the Site and surrounding areas.

2.2.2 An Extended Site Map to Include Nearby Parcels and Their Use, Nearby Groundwater Supply Wells, Site Plan View Showing Location of Structures, ASTs, USTs, Buried Utilities and Conduits, Suspected/Confirmed Sources

Site specific features that include the former UST, dispenser piping and utilities are shown in Figure 2 of Appendix A. As shown in Figure 2, below grade storm water conveyances are present in the area of the release. A comprehensive study of storm water quality was completed in 2013 which demonstrated that the CoCs from the release were not infiltrating into the storm water management system. The report documenting the storm water study is provided in Appendix F.



2.2.3 A Groundwater Elevation Map, Including a Depiction of the Groundwater Flow Direction

During seven groundwater monitoring events, measured groundwater elevations were used to evaluate groundwater flow. Figure 7 in Appendix A is a representative potentiometric surface map prepared from the September 2007 measurements. As shown in Figure 7, groundwater in the vicinity of the former UST system flows toward the southwest with a gradient of about 0.05 ft/ft. Groundwater elevation measurements for each of the seven monitoring events are summarized in Table 7 of Appendix D.

Using a porosity of 30%, and a hydraulic conductivity of 1 foot/day, the groundwater velocity is calculated to be approximately 0.17 feet/day or about 60 feet per year.

2.2.4 Map(s) and Cross-sections Depicting Remaining 3-dimensional Extent of NAPL

Measurable thicknesses of LNAPL have not been identified in any monitoring well installed at the Site in the eight years since the release was reported. No exceedances of aqueous solubility were reported for any groundwater sample collected from any of the monitoring wells during groundwater monitoring completed over the course of eight years. This finding is sufficient to demonstrate that no mobile, migrating or recoverable LNAPL is present at the Site.

Furthermore, a review of maximum concentrations of CoCs in soil samples combined with field PID screening of saturated soil samples did not identify soils with residual LNAPL saturation. Soils impacted by CoCs at concentrations exceeding Part 213 generic nonresidential or residential RBSLs are estimated at 130 cubic yards, or approximately 195 tons.

Plan view and cross sectional maps depicting the extent of remaining impacted soils are presented as Figures 4 and 5 of **Appendix A**.

2.2.5 <u>Map(s) and Cross-sections of the Remaining Groundwater Plume and Impacted Soil</u>
Plan view and cross sectional maps depicting the extent of remaining residual soil and groundwater impacts are presented as Figures 4 and 5 of **Appendix A**.



3.0 INSTITUTIONAL CONTROLS

3.1 Land and Resource Use Restrictions

To restrict land and resource use at the Site, a Restrictive Covenant was filed with the Oakland County Register of Deeds. The Restrictive Covenant prohibits the construction of wells or other devices used to extract groundwater for consumption, irrigation, or any other purpose. Additional restrictions include managing contaminated soil that may be disturbed in the future.

The Restrictive Covenant which includes modifications based on MDEQ review comments has been filed at the Oakland County Register of Deeds. A copy of the Declaration of Restrictive Covenant document is included in **Appendix G**.

3.2 Provide a Copy of the Notice and Proof of Providing the Notice to the Public Directly Impacted by the Release above a Residential RBSL and the Proposed Corrective Action

The general public is not affected by the release. Subsequent to filing of the Restrictive Covenant, notices to local units of government have been filed with the following local governmental entities and provided to the MDEQ:

City of Southfield 26000 Evergreen P.O. Box 2055 Southfield, Michigan 48037-2055 (248) 796-5150

Oakland County Health Department 27725 Greenfield Southfield, Michigan 48076 (248) 424-7000

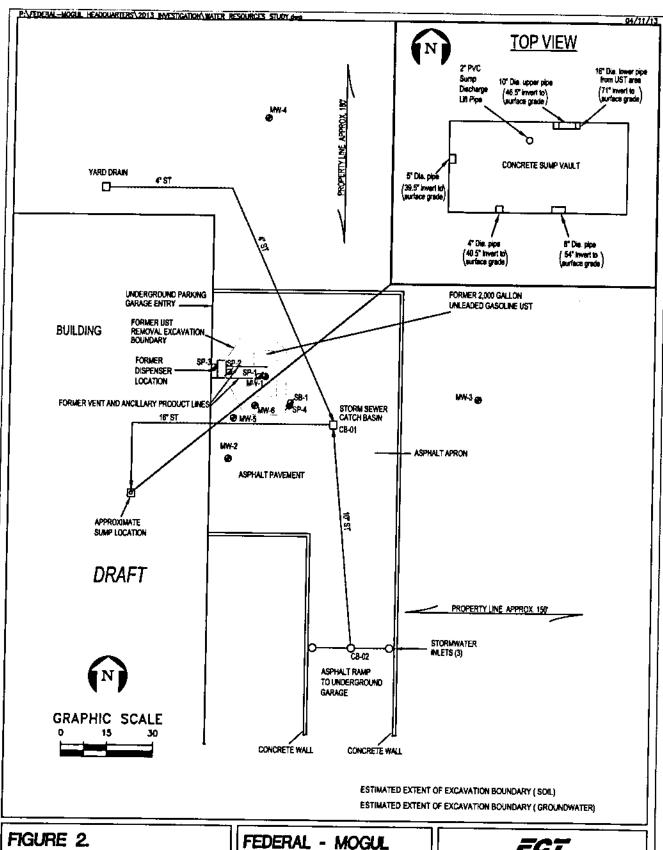
The notices include the name, address and telephone number of a Federal-Mogul contact person. The notices to local units of government were submitted to the two governmental agencies and included copies of the recorded restrictive covenant.

The Site is zoned "ERO – Education Research – Office (Limited)," However, the Site may be rezoned for a residential land use in the future. Use of the site is appropriate for the zoning, potential future zoning changes and a Tier I Residential Restricted Closure of the Site.

- 4.0 APPLICABLE IAR/FAR DOCUMENTATION
- 4.1 Additional Site Characterization was Performed Following Submittal of FAR, then Refer to IAR/FAR Tables of Contents and Include All Relevant Information that is Not Already Provided in this Closure Report

This Tier I restricted residential closure report contains all pertinent information which has not previously been submitted to the MDEQ. Based on a review of MDEQ-RRD Operational Memorandum No. 3, dated August 21, 2003, the Site would have a Site Classification of 4, no demonstrable long term exposure risk and a Tier I restricted residential closure is appropriate. Appropriate deed restrictions have been put in place to prevent exposure to the limited volume of media impacted by CoCs.

There has been no classification change since the submission of the last report.



FORMER UST SITE PLAN

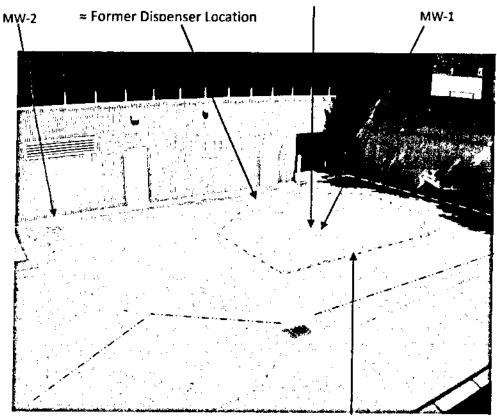
Source: ECT, 2014.

FEDERAL - MOGUL WORLD HEADQUARTERS SOUTHFIELD, MI

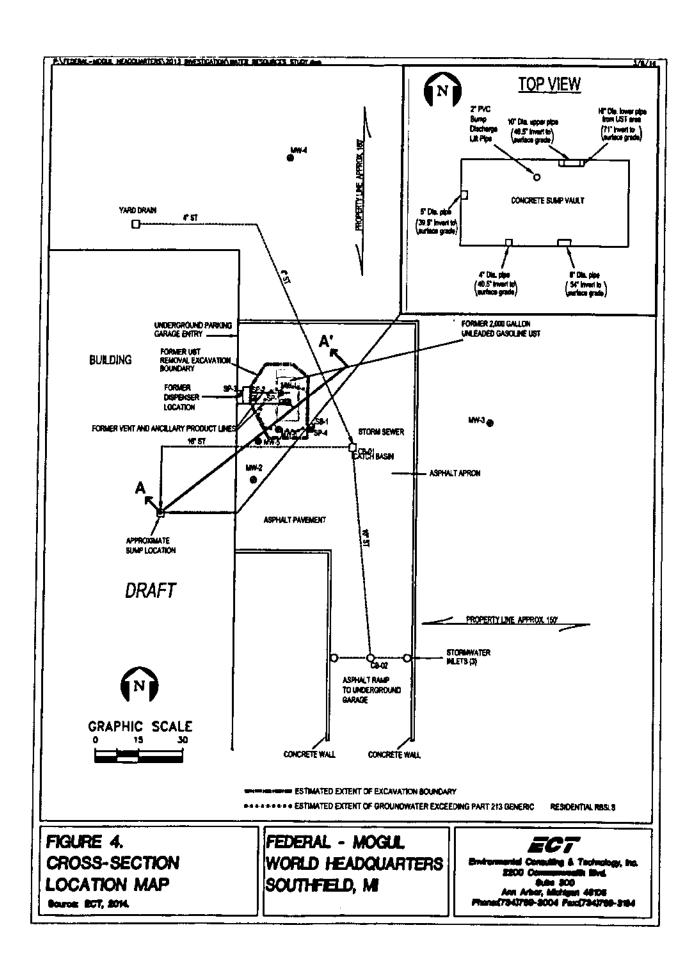
Environmental Consulting & Technology, Inc. Ann Arbor, Mohigan 48108 Phone(734)789-3004 Fex(734)789-3164

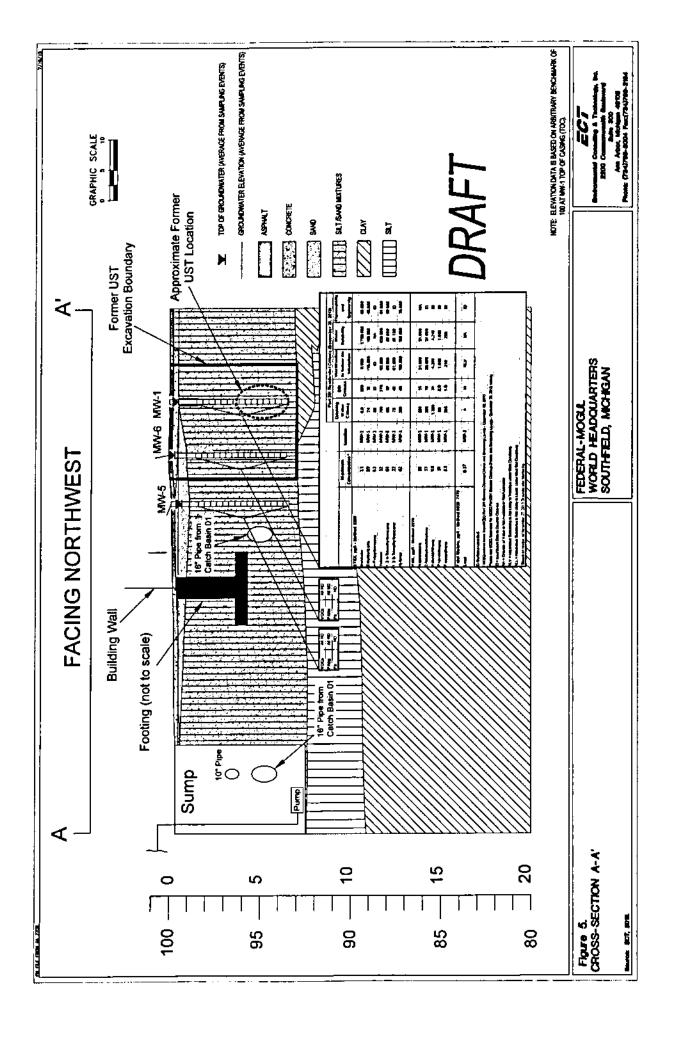
FIGURE 3

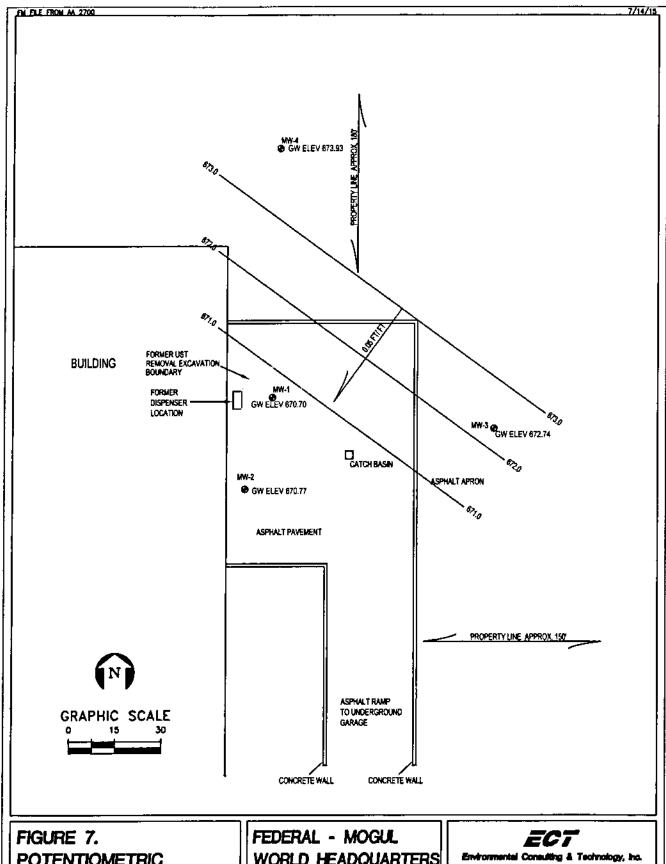
≈ Former Tank Location



Former UST Removal Excavation (Asphalt Cut Outline)



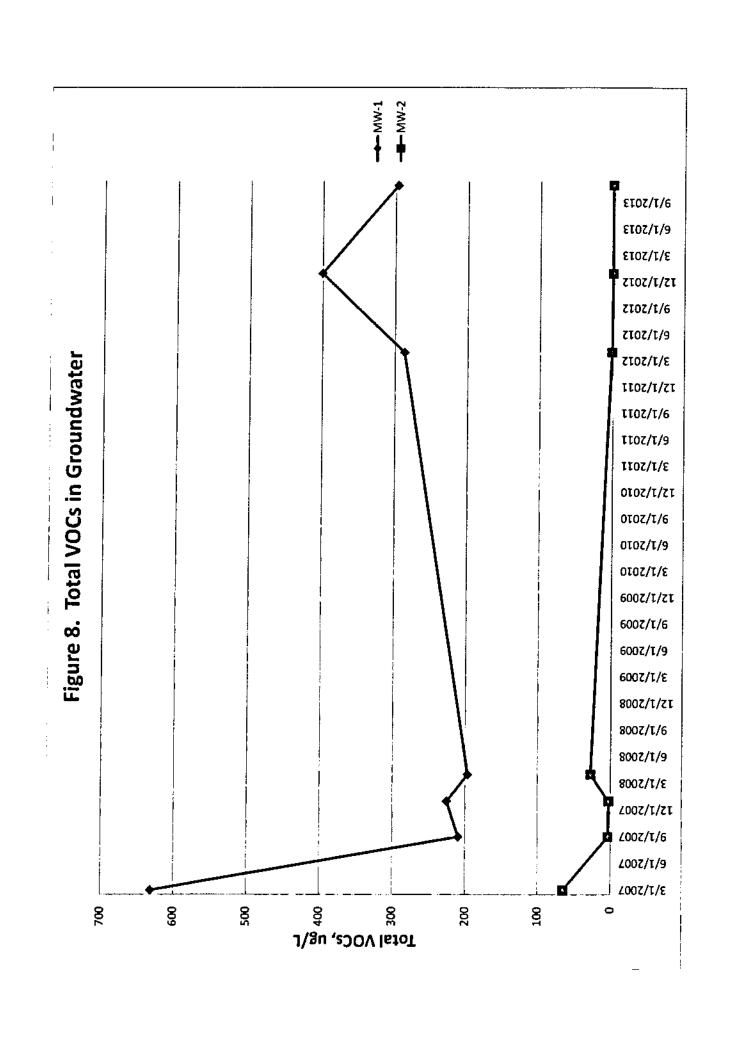


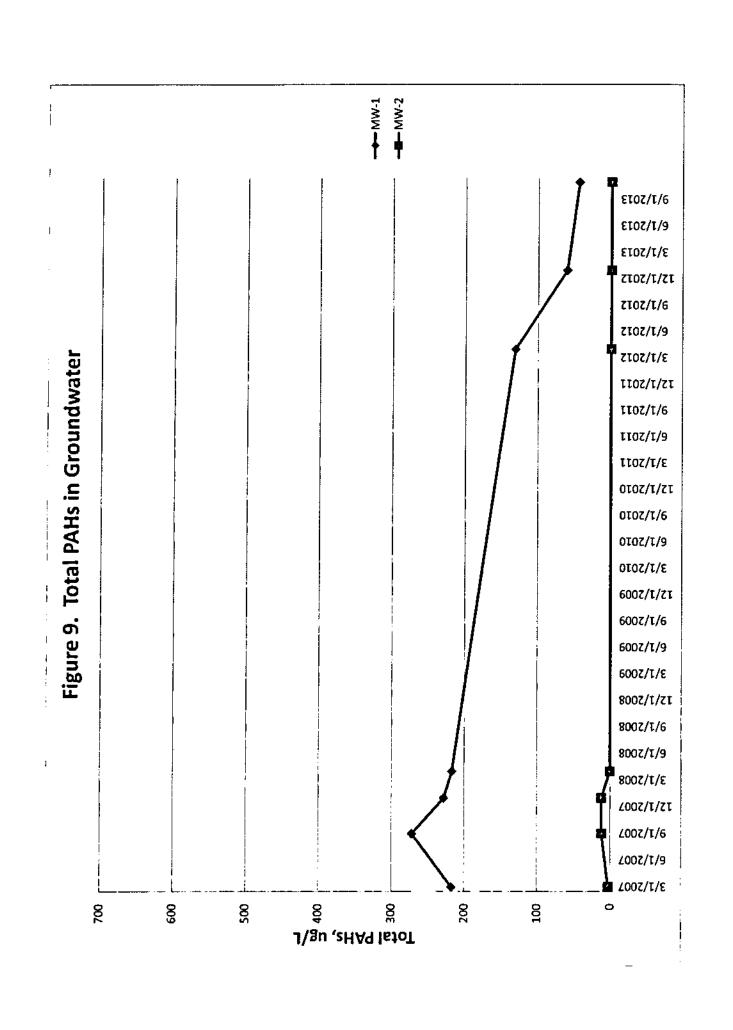


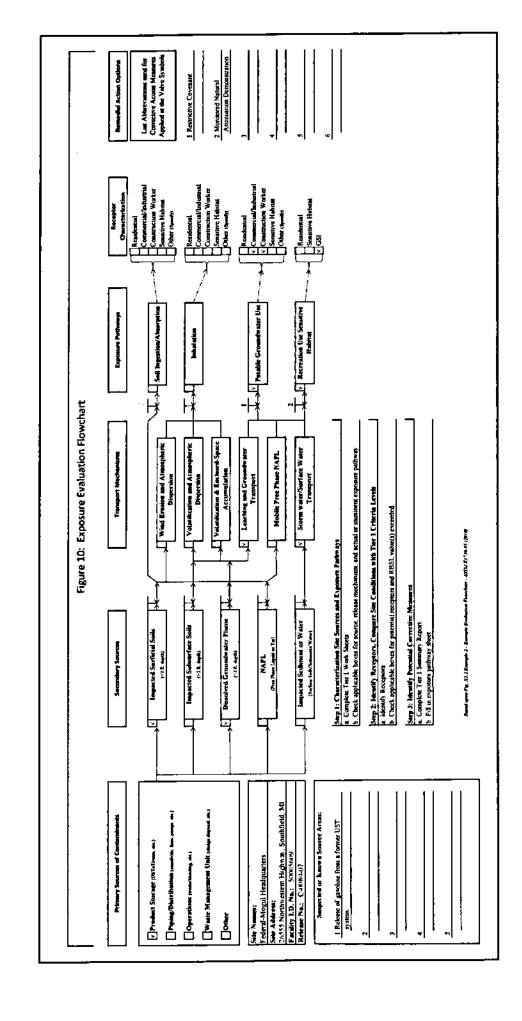
POTENTIOMETRIC SURFACE MAP - 9/27/07 Source: ECT, 2008.

WORLD HEADQUARTERS SOUTHFIELD, MI

2200 Commonwealth Bivd. Suite 300 Arm Arbor, Mohigen 48105 Phone(734)789-3004 Fax:(734)789-3184







11/9/2015

From:

John D'Addona [jdaddona@ectinc.com]

Sent:

Tuesday, July 21, 2015 4:07 PM

To:

Brian Burke

Subject:

FW: Federal-Mogul - World Headquarters - Ust Release Site

From: LeBar, James (DEQ) [mailto:LEBARJ@michigan.gov]

Sent: Monday, April 27, 2015 10:59 AM

To: John D'Addona

Cc: Bahrou, Andrew (DEQ)

Subject: RE: Federal-Mogul - World Headquarters - Ust Release Site

Mr. D'Addona:

I apologize for not getting back to you sooner on your July 17, 2014, submittal requesting our input on your GSI pathway evaluation at the Federal Mogul facility in Southfield. I finally had a chance to review it that included a few meetings with the district's GSI specialist along with Jeanne Schlaufman and Andrew Bahrou.

Overall, RRD district staff thought your investigation was fairly comprehensive, especially with the inclusion of the work you did for Andrew. The extra sampling events your company conducted for both programs provided value added information that helped us to reach a conclusion about the GSI pathway. From a Part 213 prospective, the storm water collection sump is the compliance point for the GSI pathway and the water samples that were collected from the sump and inlet piping did not detect any petroleum VOC compounds that are prevalent in groundwater samples from MW-1 within the UST source area at the end of the parking ramp into the underground parking garage. We concur that the GSI pathway is not complete with respect to the Part 213 release.

That said, the drinking water pathway is still applicable at this site with the reoccurring samples of various petroleum compounds exceeding the drinking water risk based screening levels. However, your comment on the last page of the report to my attention with a request for a Restricted Residential Closure (prohibiting groundwater usage as a drinking water source) is something the RRD would be willing to consider for this site. The appropriate institutional controls would have been utilized for a restricted closure.

You will still need to seek Mr. Bahrou's opinion on the work you completed for his regulatory program, but the July 2014 submittal documenting your company's investigation for the GSI pathway was adequate for eliminating this pathway for the Part 213 release at this site.

Again, I do apologize for the delay in getting back to you. If you have any questions, please don't hesitate to contact me.

Thanks,

Jim LeBar RRD Project Manager SE MI District 586-753-3822

From: John D'Addona [mailto:jdaddona@ectinc.com]

Sent: Thursday, October 09, 2014 1:34 PM

To: LeBar, James (DEQ)
Cc: Schlaufman, Jeanne (DEQ)

Subject: Federal-Mogul - World Headquarters - Ust Release Site

Mr. Lebar,

At the end of July, I sent you a summary report on behalf of Federal-Mogul Corp. for the additional investigation work completed at the Federal-Mogul Headquarters in Southfield, Michigan. The purpose of the report was to let you know that the agreed upon investigation work with the DEQ – RRD and WQD was completed and to summarize the findings of the investigations. A separate report has been submitted to DEQ-WQD that responded to their concerns. Based on the data, our conclusions are that we can also proceed to submitting an UST Amended Closure Report to DEQ-RRD. Prior to undertaking such a report we were interested in hearing whether you had looked at the data and saw any issues that would prevent us from gaining closure. In this way we could avoid submitting a closure report that might be rejected and therefore require another response iteration. Any thoughts?

John J. D'Addona, P.E.
Manager of Brownfield Services | Senior Engineer
Environmental Consulting & Technology, Inc.
2200 Commonwealth Blvd., Suite 300 | Ann Arbor, MI 48105
734-769-3004 (Office) | 734-330-4542 (Mobile) | 734-769-3164 (Fax) | Idaddona@ectinc.com | www.ectinc.com



BY: MJQ-PEA

PROJECT NAME:

26555 NORTHWESTERN HWY

PROFILE

PROJECT LOCATION: SOUTHFIELD, MI

START: 08/27/06

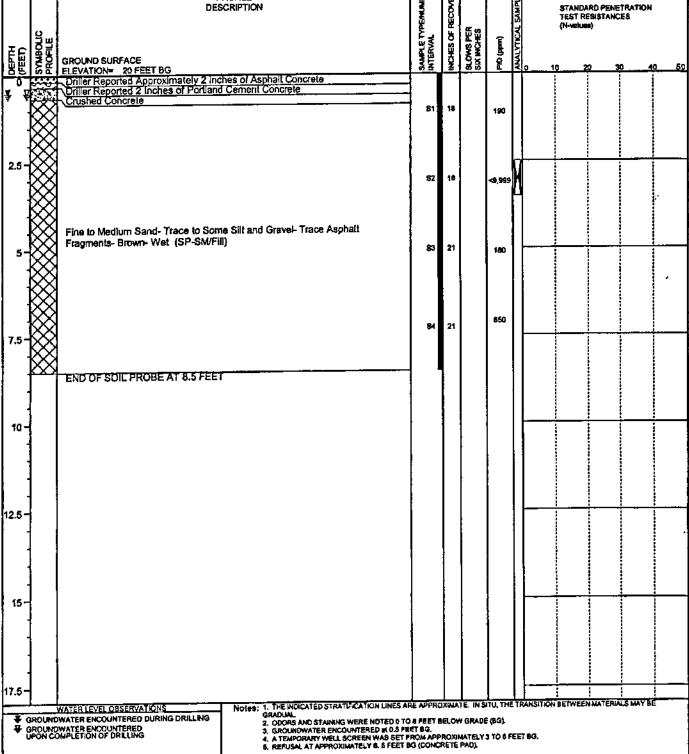
SOIL PROBE SP1

END: 06/27/06 SHEET: 1

LEXINGTON CORPORATE PROPERTIES TRUST CLIENT:

PROJECT NUMBER: PE52844

STANDARD PENETRATION TEST RESISTANCES



DRILLER: SME

DRILL METHOD:

BACKFILL METHOD:

WATER LEVEL DURING DRILLING: 0.5 FEET BG WATER LEVEL UPON COMPLETION: 0.5 FEET 8G

RIG NO.: ATV



PROJECT NAME:

26555 NORTHWESTERN HWY

PROJECT LOCATION: SOUTHFIELD, MI

BY: MJQ-PEA START: 06/27/06

END: 06/27/06

CLIENT:	OCATION: SOUTHFIELD, MI LEXINGTON CORPORATE PROPERTIES TRUST	PROJECT			PE52		(21)		ND: UD/2// HEET: 1	
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0	Driller Reported Approximately 2 Inches of Asphalt Concrete Driller Reported 2 Inches of Portland Cement Concrete						П			
	Fine to Coarse Sand- Some Gravel- Trace to Some Slit- Dark Brown Wet (SP-SM/Fill)	- Moist to	51	14		< 1				
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5-			83	21		্ধ	-			
7.5	Silty Sand- Trace Gravel- Frequent Sandy Silt Layers and Seams- Br (SM)	rown-Wet	84	21		ধ				
10-			85	21		<1				
	END OF SOIL PROBE AT 12 FEET		\$6	21		ব				
12.5 -										
15-	·									
17.5-										
₩ GROUND)	VATER LEVEL OBSERVATIONS VATER EVEL OBSERVATIONS VATER ENCOUNTERED DURING DRILLING VATER ENCOUNTERED ATEMPORARY WELL SCREEN A TEMPORARY WELL SCREEN VATER EVEL OBSERVATIONS I, THE INDICATED STRATIFICATION GRADUAL 2. GROUNDWATER ENCOUNTER 3. A TEMPORARY WELL SCREEN VATER EVEL OBSERVATIONS V	EREO AT 0.5 FEI	ET BG.						I I	AY BE

DRILLER: SME

DRILL METHOD:

RIG NO.: ATV BACKFILL METHOD: WATER LEVEL DURING DRILLING: 0.5 FEET BG

WATER LEVEL UPON COMPLETION: 0.5 FEET BG



PROJECT NAME:

26555 NORTHWESTERN HWY

PROJECT LOCATION: SOUTHFIELD, MI

LEXINGTON CORPORATE PROPERTIES TRUST

A/E:

BY: MJQ-PEA START: 06

PROJECT NUMBER: PE52844

START: 06/27/08

/06 END: 06/27/06

SHEET: 1

SOIL PROBE SP3

ELIEN	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPENIMBER INTERVAL	INCHES OF RECOVERY	BLOWS PER SIX INCHES	PiO (topm)	AMALYTICAL SAMPLE	STANDARD PENETRATION TEST RESISTANCES (M-values)
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₹ ∓	\bigotimes	Crushed Asphalt	61	18	ľ	<1	$\ $	
2.5	$\overset{\otimes}{\otimes}$	Fine to Medium Sand-Trace Slit and Gravel- Brown- Wet (SP-Fill)	- S2	16	:	4		
5-			83	18		ধ		
7.5-		Silty Sand- Trace Gravel- Frequent Sandy Stit Layers and Seams- Wet (SM)	54 85			ব		
10-		END OF SOIL PROBE AT 12 FEET	96	12		<1	ļ	
12.5-		END OF SOIL PROBLEM 12 FEET		;				
15-						=		
17.5-	┨			1			╛	
\$	GROUNE	WATER LEVEL OBSERVATIONS WATER ENCOUNTERED DURING DRILLING OWATER ENCOUNTERED	FEET BG. FROM AF	PROX	MATELY	3 70 8	FEE	

DRILLER: SME RIG NO.: ATV DRILL METHOD:

BACKFILL METHOD:

WATER LEVEL DURING DRILLING: 0.5 FEET BG WATER LEVEL UPON COMPLETION: 0.5 FEET BG



PROJECT NAME:

26555 NORTHWESTERN HWY

BY: MJQ-PEA

START: 06/27/06

END: 06/27/06

PROJECT LOCATION: SOUTHFIELD, MI SHEET: 1 PROJECT NUMBER: PE52844 LEXINGTON CORPORATE PROPERTIES TRUST

	CATION: SOUTHFIELD, MI LEXINGTON CORPORATE PROPERTIES	TRUST PROJECT!	NUMBI	R:	PE52	344			SHEET:	<u> </u>	\neg
LIENT:	PROFILE DESCRIPTION		SAMPLE TYPENUMBER INTERVAL	OF RECOVERY	PER HES	Ē	IICAL SAMPLE	ST/ TEI (N-	INDARO PE ST RESISTA Mulues)	netration nces	
O (FEET) SYMBOLIC PROFILE	GROUND SURFACE ELEVATION= 20 FEET BG Driller Reported Approximately 4 Inches of Asphalt Co	ncrete	SAMPLE	INCHES OF	BLOWS PER SIX INCHES	(mata) Old	ANALYTICAL	10	20	3060	50
	Fine to Medium Sand-Trace Silt and Gravel- Brown- N		S1	19		36					
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5-	Silty Sand- Trace Gravel- Frequent Sandy Silt Layers	and Seams- Wet (SM)	\$3	21		<1					,
7.5			\$4 	21		ব					
	END OF SOIL PROSE AT 8 FEET										
10-											
12.5											
15-											
17.5	WATER LEVEL OBSERVATIONS Notes: 1. THE	INDICATED STRATIFICATION LINES	S ARE AP	PROX	IMATE.	N SITU	THE	RANSITION	BETWEEN	MATERIALS M	AY BE
¥ GROU ¥ GROU UPON	NOW ATER ENCOUNTERED DURING DALLARS \$ 000	IRS AND STARING WERE NO TEXT XUNDWATER ENCOUNTERED AT D. EMPORARY WELL SCREEN WAS BE	S FEET 8 T FROM	G. APPR	OX#MATO	LYST)) FE	ET BG.			
DRILLER: S	ME DRILL METHOD:	WATI	A LEVE	L DUI	RING DA	LLING	: O.	5 FEET E D.5 FEET	BG BG		

VTA LOHEN

BACKFILL METHOD:

WATER LEVEL UPON COMPLETION: 0.5 FEET BG

LOG OF BORING ECT, MW-1 (Page 1 of 1) Environmental Consulting & Technology, Inc. : Former UST Area : 24 March 2007 Baring Location Date Completed Federal Mogul : Proximal to SME SP-1 26555 Northwestern Highway Hole Diemeler : 4.25" HSA Southfield, Michigan : North American Probing **Drifting Company** : 670.75 **Drilling Method** : Geoprobe & Hollow Stern **TOC Elevation:** ECT Rep. : Michael T. Hebert, CPG, CHMM, PG, CUSTP ECT Project Number 07-0197 GRAPHIC Depth DESCRIPTION REMARKS Feet Cover 0 2" Asphalt/4" Concrete Sand, medium (0.06) to fine (0.003), Hole Plug sub rounded, trace sit and clay, moist, 10 YR 5/3 - weak red <1 ppm <1 ppm Saturated during driffing SM <1 ppm Screen <1 ppm 6-3 Sand Pack Sand, fine (0.02-0.003), rounded, 2 <1ррян appreciable amount of fines, <25% sur, trace of clay, moist, 10YR 5/1 reddish gray MI, <1 ppm Silt, molet, 2 GLEY 5/1 blutch gray Silty Clay, moist - not saturated, GLEY 5/1 - bluish gray <1 ppm 10-<1 ppm 11-03-27-2007 P:Phojects - Date CNLYR2007 Projecte/070197/Logelme-1.box 12-<1 ppm 13-14-Hole Plug CL <f ppm 15 <1 ppm 16-17-4 <1 ppm Semple (SB-1/ MW-1 @ 16-19) 18-19-<f ppm 20

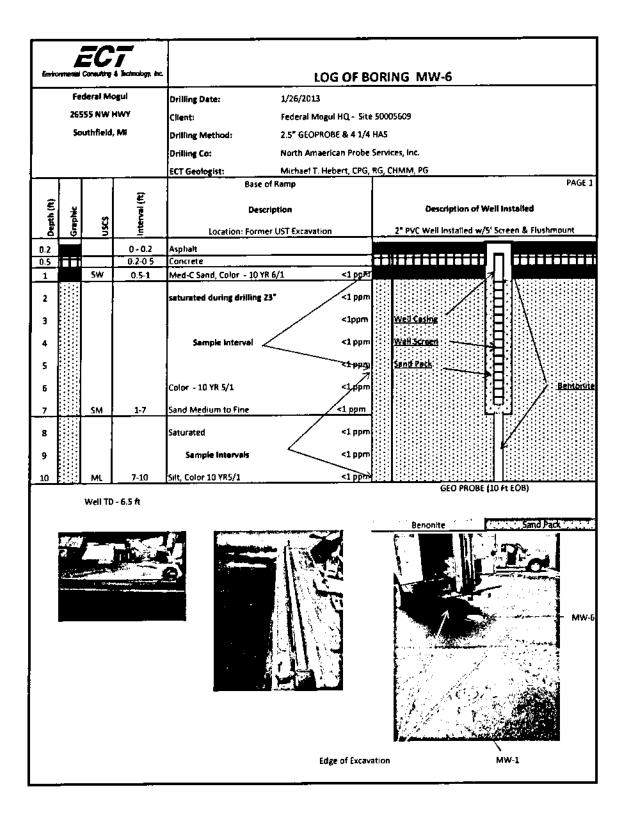
LOG OF BORING ECT, MW-2 Environmental Consulting & Technology, Inc. (Page 1 of 1) Federal Mogul **Date Completed** : 24 March 2007 **Boring Location** : Former UST Area 26555 Northwestern Highway Hole Diameter : 4.25" HSA Southfield, Michigan **Drilling Company** : North American Probing **Drilling Method** : Geoprobe & Hollow Stern TOC Elevation: : 671.06 ECT Project Number 07-0197 ECT Rec. : Michael T. Heberl, CPG, CHMM, PG, CUSTP Depth ಬ್ಬ DESCRIPTION REMARKS Fest Cover 0-6° Asphalt Sand & Gravel, (0.003 - 0.19) poorly graded, moist, 10YR 5/3 week red SP Hole Plug <1 ppm Sitt, moist, 2 GLEY 5/1 bluish gray Casing 2-<1 ppm Saturated during drifting <1 ppm ML Screen Sand Pack Moist not eaturaled <1ppm 2 <1 ppm 03-27-2007 PYProjects - Date CHLYNOOY Projects/070197/Logs/mw-2.tor <1 ppm 10-Sitty Clay, moist - not saturated, GLEY 5/1 - bluish gray <1 ppm Hole Plug 12-13-14-15

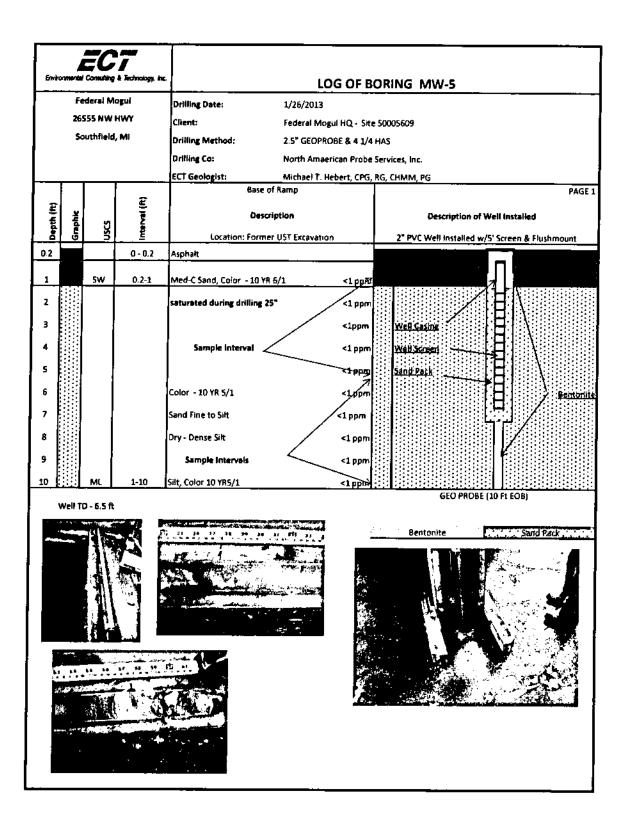
LOG OF BORING ECT, MW-3 Environmental Consulting & Technology, Inc. (Page 1 of 1) Federal Mogul **Date Completed** : 24 Merch 2007 **Boring Location** : Former UST Avea 28555 Northwestern Highway Hole Diameter : 4.25" H8A Southfield, Michigan Drilling Company : North American Probing **Drilling Method** : Geoprobe & Hollow Stem **TOC Elevation:** : 685,89 ECT Project Number 07-0197 ECT Rep. : Michael T. Hebert, CPG, CHMM, PG, CUSTP Depth DESCRIPTION REMARKS Cover 0 Top Soil Sand Pack Sand, medium (0.08 - 0.2), trace of clay, moist, 10YR 5/3 brown <1 ppm <1 ppm <1 ppm <1 ppm -Hole Plug Casing 2 <1ppm 10 Sand, fine (0.02-0.003), trace of sit, moist, 10YR 5/1 - gray <1 ppm 12 <f ppm SM Sit & Fine Sand, (0.02-0.003), moiet, GLEY 5/1 bluish gray <1 ppm 15 SM 16 <1 ppm 17 Silt, saturated, GLEY 5/1 bit/sh gray <1 ppm 18-Saturated during drilling 19 <1 ppm 20

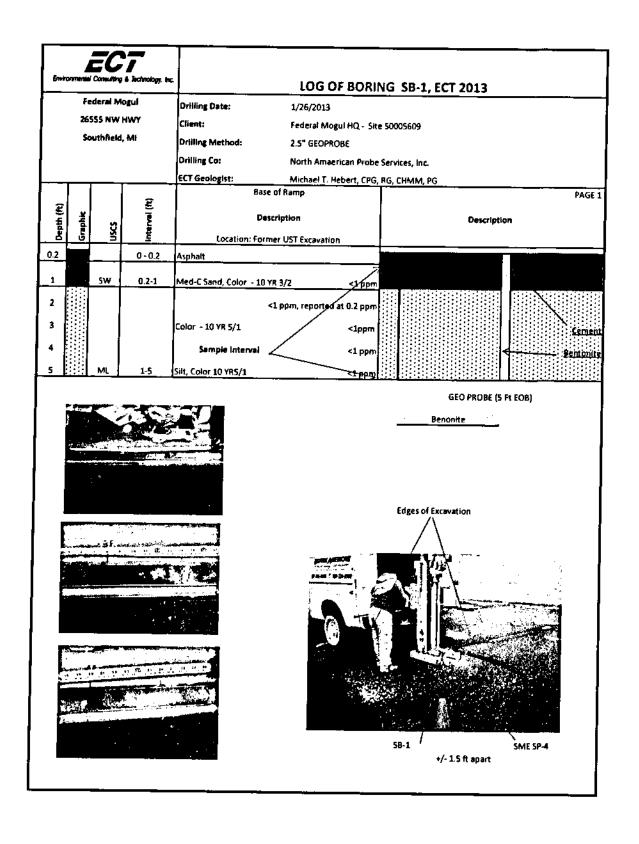
03-27-2007 PVProjects - Data ONLY72007 Projects/070197/Logalma-8.bor

LOG OF BORING ECT, MW-4 Environmental Consulting & Technology, Inc. (Page 1 of 1) Federal Mogul **Date Completed** : 24 March 2007 **Boring Location** : Former UST Area 26555 Northwestern Highway Hole Diameter :425 HSA Southfield, Michigan **Drilling Company** : North American Probing **Drilling Method** : Geoprobe & Hollow Stem TOC Elevation: : 684.69 ECT Project Number 07-0197 ECT Rep. : Michael T. Hebert, CPG, CHMM, PG, CUSTP GRAPHIC Depth USCS DESCRIPTION REMARKS Feet Cover 0. Top Soil Sand Pack 2. Mixture of Sand medium (0.08-0.2) and Fly Ash (.02-2.9), trace of metal & clay tile debris, trace of cobbles, molet, 10YR 2.5/2 - very bark Send, medium (0.06 - 0.2), trace of clay, moist, 10YR 5/3 brown <1 ppm Hole Plug <1 ppm <1 ppre SÇ 8 9. <1ppm 10-11 Sand, fine (0.02-0.003), trace of sit, moist, 10YR 5/1 - gray <1 ppm 12-<1 ppm Silt & Fine Sand, (0.02-0.003), moist, PNPtojects - Date ONLY12007 Projects/070167/Logsfmw.3 box 13-GLEY 5/1 bluish gray 14 3 Silt, eaturated, GLEY 5/1 bluish gray <1 ppm 15-Beturated during drilling 16-Screen ct ppm ML 17 Sand Pack 18-<1 ppm 19 20-21 22.

1002-17-50







Soli Semple Analytical Results

Federal-Mogul World Headquariers 28555 Northwestern Highway, Southfield, Michigan

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Pages 1.

1976 or Interpretation per laboratory Reporting Lines

4 - Interpretation per laboratory Reporting Lines

8 - Interpretation per laboratory Reporting Lines

8 - Interpretation Proceeding Reporting Lines

8 - Interpretation Proceeding Reporting Lines

8 - Interpretation Proceeding Reporting Lines

9 - Interpretation Proceeding Reporting Lines

9 - Interpretation Lines Barrier Lines

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Federal-Mogul Headquarters LUST Closure Maximum Concentrations in Soil 26555 Northwestern Highway Southfield, Michigan **TABLE 2**

Part 201 Residential Criteria (December 30, 2013)

			Drinking Water	GSI Protection	Indoor Air	Ambient Air Volatile	Ambient 2	
	Maximum	Location	Protection Criteria	Criterla	Criteria	Inhalation (VSIC)	Particulate Inhalation	Contact
	Concentration							
BTEX, µg/kg - Method 8260 Ethylbenzene Toluene	42 200 200	SB-1, MW-1 (18 - 19') SB-1, MW-1 (18 - 19') SB-1, MW-1 (18 - 19')	1,500 16,000 5,600	360 5,400 820	87,000 330,000 6,300,000	720,000 2,800,000 46,000,000	1,000,000,000 1,000,000,000 1,000,000,00	22,000,000 50,000,000 410,000,000
Ayeres								
PAH, µg/kg - Method 8270 Naphthalene	2,900	ECT-SB-1-2013	35,000	730	250,000	300,000	200,000,000	1,600,000
Phenanthrene	250 490	ECT-58-1-2013	730,000	5,500 Cl	1,000,000,000	650,000,000	4,100,000,000	29,000,000
Pyrene	480	ECI-38-1-2013						
Total Metals, µg/kg - Methods 6020, 7471	3,900	S8-1, MW-1 (18 - 19')	000'002	2,500,000*	NIC	ALC N	100,000,000	400,000
Dead			-					

Criterion exceeded

¹ MDEQ criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Layels - December 30, 2013

Please see MDEQ footbotes for MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 30, 2013 criteria

(D = Insufficient Data to Develop Criterion

NA = Criterion of Value is Not Available or Not Applicable

 $\rm NLV = Hazzerdous$ Substance is Not Likely to Volatikze Under Most Conditions

NLL = Hazardous Substance is Not Likely to Leach Under Most Soil Conditions

*Hardness Dependant GSI Criteria Calculated Using an Assumed Hardness of 150 mg CaCO3/L NT = Not Tested

**Criteria for Chromium III used

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TABLE 4

Maximum Concentrations in Groundwater - Monitoring Wells
Federal-Mogul Headquarters LUST Closure
26555 Northwestern Highway
Southfield, Michigan

BTEX, µg/l - Method 8260 Maximum Concentration* Location Criteria Location Orinking Criteria Criteria Criteria Concentration* Criteria Criteria Location Criteria Criteria Ophinking Criteria Criteria Concentration* Criteria Location Criteria Waster Criteria Inhalation Concentration* Criteria Criteria Inhalation Volability And and and and and and and and and and a				Pa	t 201 Resi	Part 201 Residential Criteria (December 30, 2013)	December 30,	2013)
Maximum Location Water Criteria Criteria Inhalation Concentration* Concentration* Location Criteria Criteria Inhalation Colubility Criteria Inhalation Concentration* Concentration* Solubility Criteria Inhalation Concentration* Solubility Criteria Inhalation Colubility Inhalation Colubility Criteria Inhalation Colubility Inhalation Colubility Criteria Inhalation Colubility Inhalation				Drinking		Volatilization	Water	Flammability
ethod 8260 1.1		Maximum Concentration*	Location	Water	GSI Criteria	to Indoor Air	Solubility	and
1.1 MW-1 5.0 200 5,600 1,750,000 6.5 MW-1 74 18 110,000 169,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750,000 1750 175 175 175 175 1750,000 1750 175 175 1750,000 1750 175 175 1750,000 1750,000 1750 175 175 1750,000 1750 1750 1750 1750 1750 1750 1750 1	BTEX, µg/l - Method 8260							CAPIOSIVICA
8.9 MW-1 74 18 110,000 169,000 benzene 6.5 MW-1 80 ID ID NA benzene 6.4 MW-1 790 270 53,000 526,000 55,890 benzene 6.4 MW-1 72 45 61,000 61,150 benzene 6.2 MW-1 72 45 61,000 55,890 benzene 6.2 MW-1 72 45 61,000 61,150 thod 8270 89 MW-1 280 41 190,000 186,000 talene 17 MW-1 250 19 25,000 24,500 9.8 MW-1 52 2.0 1,000 4,200 4,240 14 MW-1 210 1.6 210 206 3.3 MW-1 210 1,600 1,000 MW-1 210 1,600 1,000 MW-1 21 14 14	Benzene	1.1	MW-1	20	200	5,600	1 750 000	000 89
he 6.5 MW-1 80 ID ID NA benzene 6.4 MW-1 790 270 53,000 526,000 526,000 526,000 526,000 526,000 52,890 61,150 61,1	Ethylbenzene	8.9	MW-1	74	18	110.000	169 000	43,000
benzene 64 MW-1 790 270 53,000 526,000 526,000 benzene 64 MW-1 63 17 56,000 55,890 55,890 benzene 22 MW-1 72 45 61,000 61,150 61,150 thod 8270 89 MW-1 280 11 190,000 186,000 116,000 117 MW-1 260 19 25,000 24,600 1,00	n-Propylbenzene	6.5	MW-1	8	₽	<u></u>	¥	<u></u>
benzene 64 MW-1 63 17 56,000 55,890 61,150 6	Toluene	12	MW-1	790	270	53,000	526,000	61,000
thod 8270	1,2,4-Trimethylbenzene	75	MW-1	63	17	26,000	55.890	56,000
thod 8270 thod 8270 slene 17	1,3,5-Trimethylbenzene	22	MW-1	72	45	61,000	61.150	al al
thod 8270 89 MW-1 520 11 31,000 24,600 24,600 9.8 MW-1 14 MW-1 52 20 1,000 1,000 1,000 206 191 24,000 24,000 24,000 24,240 1,000 1,000 1,000 206 1,000 206	Xylenes	62	MW-1	280	4	190,000	186,000	20,000
thod 8270 89								
89 MW-1 520 11 31,000 31,000 17 MW-1 260 19 25,000 24,600 9.8 MW-1 1,300 38 4,200 4,240 14 MW-1 52 2.0 1,000 1,000 3.3 MW-1 210 1.6 210 206 1g/l - Method 6020, 7470 0.37 MW-3 4 14 NLV NA	PAH, µg/l - Method 8270							
talene 17 MW-1 260 19 25,000 24,600 9.8 MW-1 1,300 38 4,200 4,240 1,000 1,000 3.3 4,200 1,000 1,000 3.3 4,240 1,00	Naphthalene	68	MW-1	520	1	31,000	31,000	Ą
9.8 MW-1 1,300 38 4,200 4,240 14 MW-1 52 2.0 1,000 1,000 3.3 MW-1 210 206 1.6 210 206 2.0 1,000 1,000 2.0 1,000 1,000 2.0 1,000 1,000 2.0 1,000 1,000	2-Methylnaphthalene	17	MW-1	260	<u>6</u>	25,000	24.600	≘
# 14 MW-1 52 2.0 1,000 1,000 3.3 MW-1 210 1.6 210 206 µg/l - Method 6020, 7470 0.37 MW-3 4 14 NLV NA	Acenaphthene	8.6	MW-1	1,300	88	4,200	4.240	: ♀
Hg/I - Method 6020, 7470 0.37 MW-3 4 14 NLV NA	Phenanthrene	14	MW-1	52	2.0	1,000	1,000	. ≘
Metals, µg/l • Method 6020, 7470 0.37 MW-3 4 14 NLV NA	Fluoranthene	3.3	MW-1	210	1.6	210	206	• □
Metals, µg/l - Method 6020, 7470 0.37 MW-3 4 14 NLV NA								
0.37 MW-3 4 14 NLV NA	Total Metals, µg/l - Method 6020, 7470							
	Lead	0.37	MW-3	4	4	NLV	¥	Ω

Criterion exceeded

¹ MDEQ criteria taken from MDEQ. Part 201 Generic Cleanup Criteria and Screening Levels - December 30, 2013

Please see MDEQ footnotes for MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - Decamber 30, 2013 criteria

ID = Insufficient Data to Develop Criterion

NA = Criterion of Value is Not Available or Not Applicable

NLV = Hazardous Substance is Not Likely to Volatilize Under Most Conditions

NLL = Hazardous Substance is Not Likely to Leach Under Most Soil Conditions

^{*}Based on review of November 27, 2013 Groundwater Monitoring

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TABLE 6

Maximum Concentrations - Storm Water Collection System Piping at Sump Federal-Mogul Headquarters LUST Closure 26555 Northwestern Highway Southfield, Michigan

			Par	t 201 Resi	Part 201 Residential Criteria (December 30, 2013)	December 30,	2013)
			Drinking		Volatilization	Water	Flammability
	Maximum	10000	Water	ה ה	to Indoor Air	Solubility	and
	Concentration•	LOCALION	Crtteria		Inhalation	•	Explosivity
PAH, µg/l - Method 8270							
Benzo(a)anthracene	5.3	Lower Pipe	2.1	₽	N N	4,	Ω
Benzo(a)pyrene	6.2	Lower Pipe	5.0	٥	NLV	1.62	9
Benzo(b)fluoranthene	9.8	Lower Pipe	1.5	۵	<u>0</u>	1.5	Ω
Benzo(ghi)perylene	'n	Lower Pipe	1.0	۵	NLV	0.26	Ω
Benzo(k)fluoranthene	3.2	Lower Pipe	1.0	ž	NLV	0.8	Ω
Chrysene	6.7	Lower Pipe	1.6	0	<u></u>	1.6	Ω
Fluoranthene	- 17	Lower Pipe	210	1.6	210	210	<u>Q</u>
Indeno(1,2,3-cd)pyrene	5.3	Lower Pipe	2.0	<u>0</u>	N.V	0.022	Ω
Phenanthrene	7.5	Lower Pipe	52	2.0	1,000	1,000	Ω
Pyrene	12	Lower Pipe	140	ē	140	135	Q
		_					
Total Metals, µg/l - Method 6020, 7470							
read	6.3	Upper Pipe	4	4	NLV	Ą	<u>0</u>

Criterion exceeded

¹ MDEQ criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 30, 2013

Please see MDEO tootnotes for MDEQ Part 201 Generic Cleanup Criteria and Screening Levels - December 30, 2013 orteria

ID = Insufficient Data to Develop Criterion

NA = Criterion of Value is Not Available or Not Applicable

NLV = Hazardous Substance is Not Likely to Volatitize Under Most Conditions

NLL - Hazardous Substance is Not Likely to Leach Under Most Soil Conditions

^{*}Based on review of results from the 2013 Storm Sewer Study



Environmental Consulting & Technology, Inc.

July 17, 2014

Mr. Andrew Bahrou
Michigan Department of Environmental Quality
Southeast Michigan District Office
Water Resources Division
27700 Donald Court
Warren, MI 48092-2793

Subject: Federal-Mogul World Headquarters - 26555 Northwestern Highway

Southfield, Oakland County, MI

Short-term Characterization Study - Potential Discharges to Sump

Dear Mr. Bahrou:

On behalf of the Federal-Mogul Corporation (F-M), Environmental Consulting & Technology, Inc. (ECT) has completed a Short-term Characterization Study (Study) at its Headquarters located at 26555 Northwestern Highway, Southfield, Michigan (see Figure 1). This Study was undertaken based on a request made to F-M by the Michigan Department of Environmental Quality (DEQ), Water Resources Division (WRD) on November 7, 2012 (see Appendix A), to evaluate the quality of the water discharging to the basement sump from inlet piping that drains the apron area of the former UST as well as other possible groundwater and storm water inlets. In evaluating the sump, five (5) inlet pipes were identified as discharge points to the sump from various areas of the site (see Figure 2). Prior to the Study, one of the pipes was known to drain the apron area in the vicinity of a former gasoline UST. However, the origin of the other four pipes was unknown. The objective of the Study was to determine if any of the five inlet pipes was impacting the sump discharge water, especially water impacted by the UST release.

1.0 BACKGROUND

The UST was used to fuel company cars and removed in 1985. Based on a subsurface investigation in 2007 in the vicinity of the former UST area, a release was discovered and reported to MDEQ – Remediation and Redevelopment Division (RRD).

The asphalt apron area that covers the former UST area is located at the down slope end of a long ramp that directs vehicles to an underground parking area beneath the building. Surface water runoff from the apron area flows overland to catch basin 01 where it enters a 10-inch diameter pipe that increases to a 16-inch diameter pipe were it eventually discharges to a sump located in the basement and adjacent to an underground parking area (see Figure 2). A majority of surface water runoff from the ramp enters catch basin 02 or continues overland or via pipe to catch basin 01. Because the apron is approximately 10 feet below the ground surface groundwater is just below the asphalt. As part of the apron drainage system, finger drains are located just below the asphalt that directs groundwater to catch basin 01 and possibly other locations. No drawings of the finger drains have been located.

2200 Commonwealth Blvd., Suile 300 Ann Arbor, Mi 48105

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The sump discharges the collected groundwater and surface water runoff to the site storm sewer system where it commingles with parking lot runoff and enters the municipal storm sewer system at the southeast corner of the property in Lahser Road, prior to discharging to the Rouge River. The ramp and apron area draining to the sump is approximately 0.15 acres while the parking lot drainage area is approximately 6.85 acres in size.

Coincidently with this Study, F-M has been evaluating a release from the former UST to determine if the UST release can be closed or whether additional response actions are required. These response actions could include remediation, engineering and/or institutional controls. One of the exposure pathways being evaluated as part of the UST release is Groundwater to Surface Water Interface (GSI). The selected point of compliance for the site is the sump which is located in the building basement, in the direction of groundwater flow downgradient of the former UST area/release. Monitoring wells MW-2 and MW-5 are located directly downgradient from the UST release area before the groundwater reaches the building and the sump area.

2.0 WORK PLAN SUMMARY

Following DEQ's guidelines for completing the Study, ECT submitted a Short-term Characterization Study Work Plan (WP) on April 12, 2013 (see Appendix A). The WP activities included:

- Televising the sewer pipes entering the sump;
- Cleaning the sewer pipes entering the sump which could be draining the former UST area;
- Power washing the walls of the sump and the lips of the pipes entering the sump and removing sediment from the bottom of the sump;
- Sampling each of the sewer pipes entering the sump and the upgradient catch basin that drains
 or could potentially drain groundwater and storm water from the former UST release area during dry and wet weather conditions; and
- Reporting the investigation results to DEQ.

DEQ approved the WP on April 17, 2013, prior to the sewer and sump televising and cleaning activities and approved a modification to the WP on June 4, 2013 once the pipes that drain or potentially drain the former UST area to the sump were identified for sampling.

3.0 INVESTIGATION ACTIVITIES

The approved WP completed by ECT included the following investigation activities:

- Inlet pipes to the sump were cleaned and televised to determine which pipes could potentially be draining and delivering contaminated water from the former UST area in addition to the 16inch diameter pipe from the north (see Figure 2).
- Based on the television results, the sump samples were collected from the pipes discharging or
 potentially discharging stormwater from the apron and in the vicinity of the former UST area.



Investigation activities included the review of building and site blue prints, pumping down the sump and flooding the inlet/catch basin 01 adjacent to the former UST area outside the building to see which pipe or pipes indicated an increased discharge to the sump. Based on the investigation results, a 16-inch diameter pipe entering the sump from the northeast was confirmed as the conveyance of storm water from the inlet/catch basin (number 01) adjacent to the former UST area. The 16-inch diameter pipe inlet is located beneath a 10-inch diameter pipe also entering the north wall of the sump.

- The collection of samples from required sump inlet pipes and catch basins during wet and dry weather conditions included:
 - Two separate sampling events collected during dry weather conditions a minimum of 48 hours after any precipitation event.
 - Two separate sampling events collected during wet weather conditions resulting from storm events that were greater than 0.1 inch of rainfall, caused a discharge and were at least 72 hours from the previous measurable (greater than 0.1 inch) storm event. The grab sample was taken during the first 30 minutes of the discharge.
 - The analytical parameters for samples collected from the sump inlet that drains the apron area included leaded gasoline parameters (volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs) and lead), using EPA approved sampling methods EPA 5030B/EPA 8260B, EPA 3535A/EPA 8270C and EPA 3005A-M/EPA 6020A, respectively. An additional analytic measure was to see if filtering the samples eliminated contaminants that could be attached to particulates that might be eroding out of the asphalt.

This report documents the results of this Study as well as provides previous groundwater and surface water data associated with the UST release investigation (see Tables 1 and 2) being monitored by the DEQ Redevelopment and Remediation Division (RRD).

3.1 Cleaning and Televising Sewer Inlets and Sump

The sump and the sewer pipe inlets to the sump were cleaned and televised by Tri-County Power Rodding on May 28, 2013. Prior to the cleaning and televising activities, five (5) pipes (Figure 2) were identified as entering the basement sump. After televising each of the pipes, a determination was made as to which would require jetting to remove the buildup of sediment and would require subsequent sampling. After cleaning the drains, the sump was power washed, including the lips of all pipes entering the sump, and the sediment vacuumed from the sump and appropriately disposed.

During televising, the following observations were made of the five inlets to the sump:

- The 5-inch diameter pipe entering the west wall of the sump makes a straight run to the
 west the turns vertically up after approximately 15 feet with no other pipes entering the
 line.
- The 4-inch diameter pipe entering the south wall of the sump travels south for 20 feet and is bulkheaded with no turns and no other pipes entering the line.



- The 8-inch diameter pipe entering the south wall of the sump travels straight south for over 50 feet with no turns and no other pipes entering the line. There was significant sediment buildup in this line.
- The 10-inch diameter pipe entering the north wall of the sump travels straight north for approximately 90 feet with several pipe leads entering from the east and west. A 4-inch diameter pipe enters from the east approximately 6 feet from the sump, a 4-inch diameter pipe enters from the west approximately 48 feet from the sump, a 4-inch diameter pipe enters from the east approximately 48 feet from the sump, and a 4-inch diameter pipe enters from the east approximately 61 feet from the sump. There is also a potential vertical lead at the end of the pipe just before the bulkhead approximately 90 feet from the sump. The bulkhead is located just below a yard drain located at the ground surface.
- The 16-inch diameter pipe entering the north wall of the sump travels approximately 5 feet north and then makes a 45-degree turn to the east. At this section of the pipe, there was an obstruction at 35 feet preventing the camera from traveling all the way to the catch basin (01). Despite the obstruction, previous testing had shown that the catch basin is connected to this pipe.

As a result of the televising, cleaning and previous testing, the 16-inch diameter pipe drains water from just outside the former UST area. A 10-inch diameter pipe likely drains the grassy yard area to the north and above the apron via the yard drain, but could not conclusively be eliminated from the potential to drain water from the former UST area and was therefore requested to be added as an amendment to the WP by F-M on June 3, 2013. DEQ approved the amendment to the WP on June 4, 2013 (Appendix A). The 5-inch, 4-inch and 8-inch diameter pipes were conclusively eliminated from draining water from the former UST area and therefore eliminated from dry and wet weather sampling completed as part of the Study.

3.2 Dry and Wet Weather Sampling

A minimum of two separate dry weather and two wet weather sampling events were required to sample the 16-inch and 10-inch diameter pipes entering the north wall of the sump. Since the 16-inch diameter pipe is immediately above the 10-inch diameter pipe, the 16-inch diameter pipe is known as the "upper pipe" and the 10-inch diameter pipe is known as the "lower pipe". The dry weather samples were collected a minimum of 48 hours after any precipitation event and the wet weather samples were collected following a storm event that was greater than 0.1 inch of rainfall, caused a discharge, and was a minimum of 72 hours from the previous measureable (greater than 0.1 inch) storm event. The grab samples were collected during the first 30 minutes of the discharge.

Dry weather samples were collected on June 20, 2013, August 20, 2013 and November 27, 2013. Originally two dry weather sampling events were planned, but the third event was added to coincide with a groundwater sampling event to see if there was any correlation between contaminants in the groundwater with contaminants entering the sump. Wet weather samples were collected on October 30, 2013 and November 6, 2013. Each of the samples was analyzed by Fibertec Environmental Ser-



vices (FES) for leaded gasoline parameters and polynuclear aromatics (PNAs) using EPA approved sampling methods EPA 5030B/EPA 8260B, EPA 3535A/EPA 8270C and EPA 3005A-M/EPA 6020A, respectively.

4.0 SAMPLING RESULTS

Prior to the five dry weather and wet weather sampling events completed for the Study, five groundwater sampling events that included samples from two or more monitor wells (MW-1 through MW-6) were completed from March 2007 to April 2012. One additional groundwater sampling event that included monitor wells (MW-1, MW-2, MW-5 and MW-6) and the sump inlet pipes was completed on November 27, 2013. The results of each of these 6 sampling events indicated the presence of leaded gasoline parameters and PNAs in groundwater at MW-1 (former UST release area), but little or no VOCs or PNAs in monitor wells MW-2, MW-5 and MW-6 that are located between the UST source area and the building sump i.e. downgradient of the former UST and upgradient of the compliance point. In fact, only the first of 7 sampling events had contaminants in groundwater that exceeded residential cleanup criteria for MW-2 (xylene and lead) and neither of the two sampling events for MW-5 and MW-6 had any leaded gasoline constituents or PNAs that exceeded residential cleanup criteria. This suggests that contaminants from the UST area are not migrating beyond the former UST excavation area via the groundwater and directly to the sump.

The results of the five sampling events are included in **Tables 1 and 2**. For the 10-inch diameter upper pipe, the leaded gasoline parameters were not detected except for one lead concentration of 6.3 ug/l during a wet weather event on October 30, 2013. During that same wet weather event there was no detection of lead in the 16-inch diameter lower pipe that drains the former UST area. Additionally, no VOCs and PNAs were detected for each of the five sampling events in the 10-inch diameter upper pipe. These results suggest that contaminated groundwater from the former UST area is not reaching the 10-inch diameter upper pipe, nor is storm water run-off from the paved areas in proximity to the catch basins that are draining the apron and ramp area.

During the five sampling events, there were no leaded gasoline parameters detected in the 16-inch lower pipe. However, there were mixed results with the PNAs during dry and wet weather. During the August 20, 2013 dry weather sampling event, 10 of 16 PNAs were detected, 7 of which exceeded residential drinking water cleanup criteria and 2 of which exceeded GSI cleanup criteria. The PNAs that exceeded GSI cleanup criteria were fluoranthene and phenanthrene which have the lowest GSI cleanup criteria of 1.6 ug/l and 2.0 ug/l, respectively. During the other two dry weather sampling events no PNAs were detected. The fact that PNAs were detected during dry weather on August 20, 2013 appears to be an anomaly when compared to the remainder of the sampling events. It was thought that the PNAs being washed into the sump may have been the result of asphalt particulate matter. In order to test this hypothesis, the samples were analyzed both filtered and unfiltered to see if the filters would remove the particulates and ultimately the PNAs. As a result of this anomaly, samples collected during later sampling events on October 30, November 6 and November 27, 2013 were analyzed both unfiltered and filtered to see if the PNAs could be attached to particulate matter large enough to be filtered



out of the water. The results showed that the filtered samples still had similar concentrations of PNAs as the unfiltered samples.

During the wet weather sampling event of October 30, 2013, 8 of 16 PNAs were detected in the 16-inch diameter lower pipe, 4 of which exceeded residential drinking water cleanup criteria and 2 exceeded GSI cleanup criteria. During the other wet weather sampling event, 1 PNA was detected in the 16-inch diameter lower pipe, but no residential cleanup criteria were exceeded.

During the wet weather sampling events of October 30 and November 6, 2013, there were no leaded gasoline parameters detected in catch basin 01 in proximity to the former UST and catch basin 02 located in the ramp approximately 5 to 10 feet above the apron elevation where catch basin 01 is located. However, PNAs were detected in catch basin 01 during both wet weather events and in catch basin 02 during the November 6, 2013 sampling event. The sampling of catch basin 02 was added to the November 6, sampling event and therefore there are no sampling results for catch basin 02 for the October 30, 2013 sampling event.

During both wet weather sampling events for catch basin 01, 10 of 16 PNAs (6 exceeding residential drinking water cleanup criteria and 2 exceeding GSI cleanup criteria) were detected during the October 30, 2013 sampling event and 5 of 16 PNAs (3 exceeding residential drinking water cleanup criteria and 1 exceeding GSI cleanup criteria) were detected during the November 6, 2013 sampling event. For the November 6, 2013 wet weather sampling event at catch basin 02, 10 of 16 PNAs (6 exceeding residential drinking water cleanup criteria and 2 exceeding GSI cleanup criteria). The PNAs detected as well as their associated concentrations were virtually the same in the November 6, 2013 wet weather sampling event for both catch basins and the sump 16-inch diameter lower pipe.

5.0 CONCLUSIONS

Determinations of de minimis impact are allowed under the Michigan Compiled Laws (MCL) 324.20120e(14). Based on the following conclusions, ECT asserts that any GSI impact on this site is of de minimis nature for the following reasons and therefore requires no further assessment or remedy.

No residential cleanup criteria for leaded gasoline parameters were detected during any of the five dry and wet weather sampling events as monitored in the sump, catch basin (01 and 02) inlets and monitor wells (MW-2, MW-5 and MW-6). During the November 27, 2013 dry weather sampling event, monitor well concentrations at MW-1 indicated the presence of VOCs while the sump and catch basin samples detected no VOCs. This means that the VOCs from the former UST area are not reaching the 16-inch diameter storm sewer and/or the sump at catch basins 01 and 02 and are not reaching the sump via groundwater flow as evidenced by the lack of VOCs in MW-2, MW-5 and MW-6. Either they are not physically migrating outside of the former UST cavity or they are degrading prior to reaching catch basin 01.



Additionally, when PNAs were detected in the 16-inch diameter lower sump pipe they were different from those PNA constituents found in the groundwater at MW-1 within the UST release area and actually at slightly higher concentrations than the area of the UST release. Because the storm run-off PNA constituents and concentrations were virtually the same for both of the catch basins during the November 6, 2013 sampling event, it appears that runoff concentrations from the asphalt are the primary entry of PNAs to the sump and not infiltration or inflow to the 16-inch diameter pipe via finger drains or groundwater migration from the former UST area.

The PNAs detected and associated concentrations in the sump during wet weather conditions generally matched the PNAs detected and associated concentrations of inflow from the "first flush" to catch basins 01 and 02 during a rain event and not from groundwater entering the sump. During 1 of 2 dry weather events, low level PNAs were observed that were similar in nature to a wet weather event. It is believed that this anomaly may be the result of inflow during a dry weather day from the lawn sprinkler system. Later in the summer during dry weather, sprinkler water was observed to be running down the delivery/parking garage ramp to catch basins 02 and 01 during a dry weather period. It is speculated that this was the sampling scenario on August 20, 2013.

The PNAs detected in the 16-inch diameter lower sump pipe are likely the result of PNA constituents in asphalt, petroleum drips and residue on pavement from vehicle tires. This conclusion is supported by the fact that the PNA constituents observed in catch basin 02 upgradient of catch basin 01 were the same and of similar concentrations and the only possible source of water that enters catch basin 02 inlet is storm water run-off from the pavement.

Based on these results, F-M requests MDEQ-WRD concur that the UST release is not adversely impacting the GSI compliance point at the sump. Therefore, no further investigation or response activities related to the GSI exposure pathway are required.

If you have any questions regarding this report or would like to meet at the site to discuss these findings, please feel free to contact me at 734-769-3004.

Sincerely,

Environmental Consulting & Technology, Inc.

John J. D'Addona, P.E. Senior Engineer

C: Mark Bauer - Federal-Mogul Corporation



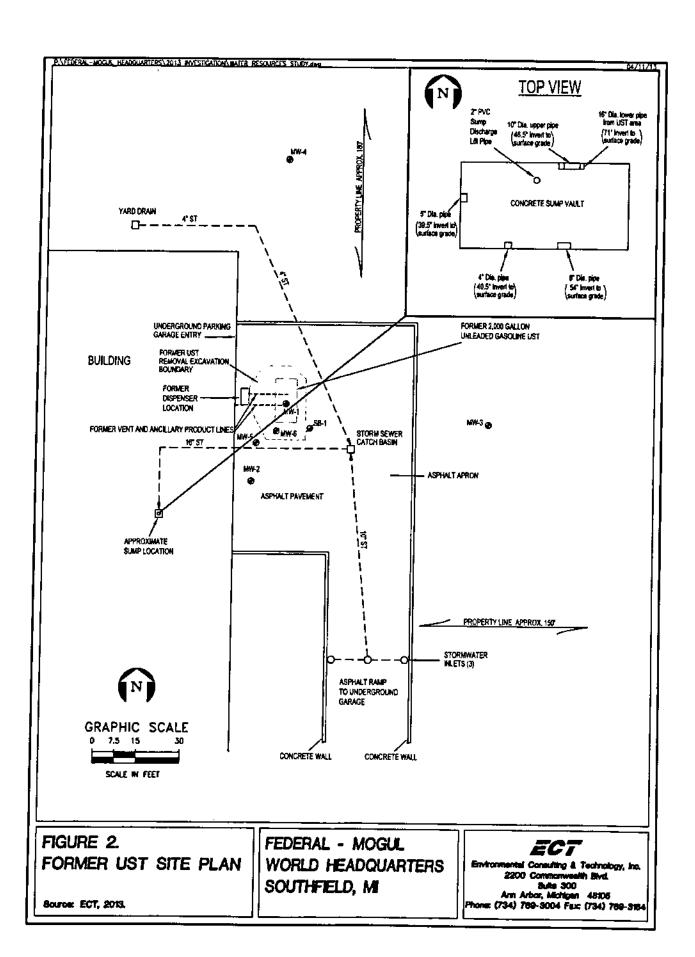


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MAY a wider in curl these productions.

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Page 2 of 2

ECT

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STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY SOUTHEAST MICHIGAN DISTRICT OFFICE



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ECT-ANNARBOR

October 3, 2012

CERTIFIED MAIL - 7009 2820 0001 6048 1848

Mr. Mark Bauer Federated-Mogul World Headquarters 26555 Northwestern Highway Southfield, Michigan 48033

Dear Mr. Bauer:

SUBJECT:

Denial of Closure Report

Closure Report Receipt Date: July 6, 2012 Federated Mogul World Headquarters

26555 Northwestern Highway, Southfield, Oakland County, Michigan

Confirmed Release Date: April 5, 2007

Facility ID No. 50005609

The Department of Environmental Quality (DEQ) has conducted an audit of a Revised Closure document entitled "Response to Compliance of Communication – Audit Letter November 3, 2011," by Environmental Consulting and Technology, Incorporated (ECT), and submitted to address the release from an underground storage tank (UST) at the subject site. This audit was performed under Section 21315 of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (NREPA).

The audit consisted of a review the July 6, 2012, Revised Closure Report (RCR) and the district file documents associated with this release. The DEQ's audit does not confirm that corrective actions have been conducted in compliance with Part 213, or that applicable Risk Based. Screening Levels (RBSLs) or Site Specific Target Levels (SSTLs) have been met. The specific deficiencies and recommendations that may correct the deficiencies are:

1. Federated Mogul and ECT have proposed an unrestricted residential closure in the original closure report, receipt date November 6, 2008, ECT's first response, receipt date May 19, 2011, in response to the DEQ's April 27, 2009 audit letter, and a second response from ECT, receipt date July 6, 2012, in reply to the DEQ's November 3, 2011 audit letter. All three ECT documents demonstrated that contamination associated with the 2007 release, still remain in the vicinity of the former UST location above the applicable residential RBSLs or applicable SSTLs, and Federated Mogul/ECT have failed to conduct adequate site investigations as part of their corrective actions. Pursuant to Section 21315(6) of the NREPA, the DEQ's audit has determined that ECT's corrective action does not confirm the generic residential RBSLs have been met.

- 2. ECT provided new contaminant information in their RCR from a Phase II Environmental Site Assessment (ESA) conducted by Soil and Materials Engineers, Incorporated (SME) on June 27, 2006. The SME Phase II ESA documented the presence of a substantial Light Nonaqueous-Phased Liquids (LNAPL) source area that exceeds the residential RBSLs, and the extent of the LNAPL mass has not been adequately characterized even after two requests from DEQ for such a characterization in 2009 and 2011 audit letters. The following deficiencies still remain unresolved at this facility:
 - a. As stated previously in the DEQ's November 3, 2011 audit letter, Part 213 of the NREPA, and Section 6.2 of the American Society for Testing and Materials Standard (ASTM) E-1739-95 (2010), pursuant to Section 21303(f) of the NREPA by reference, a risk-based corrective action (RBCA) evaluation shall be conducted only after the identification of major sources of the contaminants of concern, and the identification of the maximum concentrations of the contaminants in all potentially affected media (i.e., soil, groundwater, vapor). Page 3 of ECT's RCR indicated that ECT conducted a limited Phase II ESA in 2007, in which only four permanent monitoring wells (MW-1 through MW-4) were installed on the eastern portion of the property to complete their site assessment. A Phase II ESA is not an adequate demonstration for a RBCA evaluation, even with the inclusion of the newly submitted SME contaminant data. Section 21311a(1) of the NREPA requires the extent of the contamination be defined. In order for the contamination to be defined, site assessments need to be conducted above and below the water table to the applicable RBSLs, or applicable site specific target levels. According to the available information, neither the sources/source areas of contamination located at the site have been adequately investigated, nor the full extent of contamination defined. Due to significant data gaps in the June 2006 SME and the March 2007 ECT site assessments, additional soil boring investigations and permanent monitoring wells are warranted.
 - (b) The ECT RCR included two summary tables containing ECT's groundwater sampling events from 2007, 2008, and 2012. The summary table for the 2007 and 2008 data referenced the 2006 cleanup criteria for compliance with the statutes, but the 2012 results were compared with the March 2011 cleanup criteria. It is not acceptable to use former cleanup tables for compliance purposes when current RBLS are available. All data associated with a specific release(s) must be compared to the current cleanup criteria.
 - c. Section 21312a(1)(a) of Part 213 of the NREPA, requires documentation that corrective action activities have been completed. With the submittal of new contaminant information from SME's 2006 ESA, such documentation has not been provided, especially a delineation map showing a plan view outline of the contamination to the most restrictive residential cleanup criteria. In addition, the one well cross-section (Figure 5) in ECT's August 2008 Closure Report, is no longer adequate because of the additional SME soil boring information, and no vertical contaminant data outlining the definitive boundaries (i.e., below the most restrictive residential RBSLs) of the LNAPL body. ECT failed to provide any documentation that the LNAPL source has been horizontally and vertically delineated.

- 3. As indicated in the DEQ's November 3, 2011 audit letter, the GSI pathway is still relevant and applicable because the LNAPL body has not been adequately characterized. ECT indicated in their RCR that downgradient monitoring well MW-2, is a compliance point for eliminating the GSI pathway by sampling results. The DEQ does not concur because of the lack of characterization of the LNAPL mass noted above and no permanent monitoring wells between MW-2 and SME SP-3. The distance between these two locations are significant enough that the groundwater results from MW-2, occasionally detecting chemicals of concern (i.e., petroleum volatile organic compounds, polynuclear aromatic hydrocarbons, and lead) above target detection limits could provide supporting evidence that MW-2 is at the edge of the groundwater plume. With the petroleum plume boundaries still undefined and a generalized groundwater flow towards the on-site commercial building, the building drainage tiles (and not at the adjoining catch basin as indicated by ECT in a previous response) are still a potential conduit for contamination above GSI RBSLs to enter the nearest storm drain. Additional monitoring wells (with appropriate sampling) between MW-2 and SP-3, and multiple fluid samplings of the contaminants of concern from the building's large in-ground sump (believed to be the GSI point of compliance) are necessary to provide supporting evidence for eliminating the GSI pathway.
- 4. The RCR was missing some critical information necessary to complete the administrative record. Please provide the following:
 - a. The final laboratory reports and chain of custody form for the April 11, 2012, sampling event were not included in ECT's RCR submittal. Please provide copies of these missing documents.
 - The static groundwater measurements for the April 2012, sampling event presented in Attachment 3 of the ECT's RCR, have several discrepancies that preclude a clear understanding of the fluid readings for MW-1 and MW-2. Based on previous groundwater elevations, MW-1 and MW-2 have reported depth-to-water readings of less than one foot, but the elevation readings for these wells report crossed out all readings greater than one foot without an explanation for changing the original readings. Please provide a summary table and a groundwater flow gradient map for this monitoring event.
 - c. The second paragraph on Page 5 of the RCR references a Figure 3 in the 2006 SME Phase II ESA report, but the copy of this report provided to the DEQ only had one figure. Please provide the missing figures from the SME report.

Please submit to this office a written commitment to conduct the necessary response activities for a statutorily complete Closure Report. Your commitment letter shall include a reasonable schedule for conducting any necessary additional response activities and submittal of the statutorily complete closure report.

A copy of the new LUST Closure Report Cover Sheet is enclosed for your convenience. Please be advised that the new cover sheet requires the inclusion of a signed Certificate of Liability Insurance form with any FAR or Closure Report submittal.

If you have any questions, or wish to discuss these issues at a meeting setting, please contact Mr. James LeBar, Project Manager, at 586-753-3822, lebarj@michigan.gov, or you may contact me at the telephone number listed below.

Sincerely,

Paul Owens, District Supervisor Southeast Michigan District Office

Remediation and Redevelopment Division 586-753-3821

Enclosures

co: Mr. John D'Addona, Environmental Consulting and Technology, Inc.

Lexington Corporate Properties

Mr. Mathew Goddard, DEQ

Ms. Cheryl Wilson, DEQ

Mr. James LeBar, DEQ



Mark T. Bauer Director, Environment, Health & Safety mark bauer & federalmogul.com 248-354-9912 phone 248-354-9499 fax

November 9, 2012

Mr. James LeBar Environmental Quality Specialist Michigan Department of Environmental Quality Southeast Michigan District Office Remediation and Redevelopment Division 27700 Donald Court Warren, MI 48092-2793

Subject: UST Release for Federal-Mogul Headquarters (Facility ID No. 50005609) 26555 Northwestern Highway, Southfield, Oakland County, Michigan Meeting Results

Dear Mr. LeBar:

Thank you again for both you and Ms. Schlaufman taking time to meet with us at the Federal-Mogul Headquarters site on November 1, 2012, to discuss the status of the underground storage tank (UST) closure process associated with a release reported on April 5, 2007. The results of the meeting will provide a framework for the collection of additional subsurface data with the intent of using that data to seek an Unrestricted Residential Closure from the Michigan Department of Environmental Quality (MDEQ).

The following additional investigation activities were requested by MDEQ for completion and agreed to by Federal-Mogul Corporation;

- 1) Installation of a shallow monitor well (MW-5) that straddles the water table to be located between MW-1 and MW-2 in native soils (area not disturbed during UST removal efforts).
- 2) installation of a shallow monitor well (MW-6) that straddles the water table to be located between proposed MW-5 and MW-1 in the former UST excavation.
- Completion of a sampling event for proposed monitor wells MW-5 and MW-6 and existing monitor wells MW-1 and MW-2. The parameters to be analyzed are leaded gasoline and polynuclear aromatics (PNAs).
- 4) If possible, obtain a soil sample just beneath the pavement (0.5 to 2.5 feet below grade) in the vicinity of the former SP-4 soil boring previously completed by SME in which a PID reading of 36 ppm was observed. The parameters to be analyzed are leaded gasoline and PNAs.
- 5) Collect a water sample from the building sump (GSI compliance point) to be analyzed for leaded gasoline and PNAs.

If the results of the sampling event show that generic Residential Cleanup Criteria are met at the five sampling locations, an unrestricted residential closure will sought via the submittal of a Revised Closure Report to MDEQ. Please let me know if your understanding of the scope of work differs from ours.

Upon your concurrence with the scope of work, our consultant Environmental Consulting & Technology, Inc. (ECT) will schedule the fieldwork and notify you in advance in order to give you the option of being on-site for the drilling.

Sincerely,

Mark T. Bauer, P.E.

Director, EHS

Federal-Mogul Corporation

CC: Ms. Jeanne Schlaufman, MDEQ

Mr. John D'Addona, ECT Mr. Mike Hebert, ECT

John D'Addona

From:

LeBar, James (DEQ) [LEBARJ@michigan.gov]

Sent:

Thursday, December 06, 2012 3:05 PM

To:

jdaddona@ectinc.com

Cc:

Mark Bauer; schlaufj@michigan.gov

Subject:

Federal-Mogul World Headquarters - Work Plan Comemnts

Sorry for not getting back to you sooner on the work plan. I have some issues with it and I have discussed them with Jeanne.

Although there is some disagreement between Jeanne and I regarding the adequacy of the closure standards (new and old) at this site, the five points mentioned in Mr. Bauer's November 9. 2012 letter are the same items that were discussed at the November 1, 2012 meeting in the Federal Mogul office. The biggest issue that I have is the text is not clear on a few points that could be clarified with a map plat showing the locations of the two proposed wells and the one soil boring near SME's SP-4. Can you provide a map plat for clarification purposes?

Jeanne did ask that I rely a requirement not discussed at the November meeting and that is a survey of the former UST cavity (the outlined by grooves in the pavement). A survey of the release area needs to be provided as part of your closure report.

If you can provide a map of the three agreed upon locations noted above, it would be appreciated.

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PAID RECORDED - DAKLAND COUNTY
LISA BROWN, CLERK/REGISTER OF DEEDS

DECLARATION OF RESTRICTIVE COVENANT FOR A RESTRICTED RESIDENTIAL CORRECTIVE ACTION

MDEQ Reference No: RC-RRD-213-15-179

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the Oakland County Register of Deeds to protect public health, safety, and welfare, and the environment by prohibiting or restricting activities that could result in unacceptable exposure to regulated substances present at the Property located at 26555 Northwestern Highway, Southfield, Oakland County, Michigan and legally described in the attached Exhibit 2. The attached Exhibit 3 (Survey of Property and Limits of Land or Resource Use Restrictions) provides a survey of the Property that depicts the area or areas subject to restriction and contains the legal descriptions that distinguish those portions of the Property that are subject to the land and/or resource use restrictions specified in this Restrictive Covenant.

The Property is associated with former Federal-Mogul World Headquarters, Facility ID: 50005609 for which a Closure Report was completed under Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.21301 et seq. Corrective actions that were implemented to address environmental contamination are fully described in the site file available from the Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Division (RRD) District Office.

The Property described contains regulated substances in excess of the concentrations developed as the unrestricted residential cleanup criteria under Section 21304a(2) of the NREPA. The MDEQ recommends that prospective purchasers or users of this Property undertake appropriate due diligence prior to acquiring or using this Property, and undertake appropriate actions to comply with the requirements of Section 21304c of the NREPA.

Part 213 requires the recording of this Restrictive Covenant with the Oakland County Register of Deeds based upon the corrective action measures for the site to: 1) restrict unacceptable exposures to regulated substances located on the Property; 2) assure that the use of the Property is consistent with the exposure assumptions used to develop cleanup criteria under Section 21304a(2) of the NREPA; and 3) assure the exposure control measures relied upon in the Closure Report are effective.

The restrictions contained in this Restrictive Covenant are based upon information available at the time the corrective action was implemented by Federal-Mogul Corporation. Failure of the

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corrective action to achieve and maintain the cleanup criteria, exposure controls, and requirements specified in the Closure Report; future changes in the environmental condition of the Property; changes in the cleanup criteria developed under Section 21304a(2) of the NREPA; the discovery of environmental conditions at the Property that were not accounted for in the Closure Report; or use of the Property in a manner inconsistent with the restrictions described herein may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment. The adequacy of the corrective action undertaken pursuant to the Closure Report may not have been reviewed by the MDEQ

<u>Definitions</u>

For the purposes of this Restrictive Covenant, the following definitions shall apply:

"MDEQ" means the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf.

"Owner" means at any given time the then-current title holder of all or any portion of the Property.

"Property" means the real property as described in Exhibit 2 of this Restrictive Covenant that is subject to the restrictions, terms and conditions described herein.

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA and Part 213 of the NREPA, shall have the same meaning in this document as in Part 3 and Part 213 of the NREPA, as of the date this Restrictive Covenant is filed.

Summary of Environmental Conditions and Corrective Action.

The hazardous substance1,2,4-trimethylbenzene is present in soil and groundwater in proximity to the location of a former underground storage tank (UST), in concentrations that do not permit unrestricted use of the Property. Specifically, 1,2,4-trimethylbenzene remains in groundwater in concentrations that exceed residential drinking water cleanup criteria. This potential exposure risk has been addressed by preventing the use of groundwater for ingestion.

NOW THEREFORE.

1. Declaration of Land or Resource Use Restrictions.

Federal-Mogul Corporation, as Owner of the Property hereby declares and covenants that the Property shall be subject to the following restrictions and conditions:

a. <u>Prohibited Activities to Eliminate Unacceptable Exposures to Regulated Substances</u>. The Owner shall and does hereby prohibit activities on the Property that may result in exposures above levels established in the Closure Report. These prohibited activities include:

Exposure Restriction for Use of Groundwater:

- (i) The construction and use of wells or other devices on the Property to extract groundwater for consumption, irrigation, or any other purpose, except as provided below:
 - (a) Wells and other devices constructed for the purpose of evaluating groundwtaer quality or to remediate subsurface contamination associated with a release of regulated substances into the environment are permitted provided the construction of the wells or devices complies with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, or federal laws or regulations.
 - (b) Short-term dewatering for construction purposes is permitted provided the dewatering, including management and disposal of the groundwater, is conducted in accordance with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, and federal environmental laws and regulations.
- b. Prohibited Activities to Ensure Effectiveness and Integrity of the Corrective Action. The Owner shall prohibit activities on the Property that may interfere with any element of the Closure Report, including the performance of operation and maintenance activities, monitoring, or other measures necessary to ensure the effectiveness and integrity of the Closure Report. These prohibited activities include:

Monitoring Well Disturbance Restriction:

Any activity that would interfere with the function of or obstruct access to any monitoring wells and devices located on the Property. This includes, but is not limited to removing, destroying, or altering any well or device in any way that renders it inoperable or incapable of functioning as intended.

- 2. Contaminated Soil Management. The Owner shall manage all soils, media, and/or debris located on the Property in accordance with the applicable requirements of Sections 21304b of the NREPA; Part 111, Hazardous Waste Management, of the NREPA; Subtitle C of the Resource Conservation and Recovery Act, 42 USC Section 6901 et seq.; the administrative rules promulgated thereunder; and all other relevant state and federal laws.
- 3. Access. The Owner grants to the MDEQ, Federal-Mogul Corporation, Federal Southfield Limited Partnership and Lex Southfield II L.P., and their respective successors and assigns, and their designated representatives, the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the Closure Report, including the right to take samples, inspect the operation and maintenance of the corrective action measures and inspect any records relating to them, and to perform any actions necessary to maintain compliance with Part 213 and the Closure Report.

- 4. Conveyance of Property Interest. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms of the Closure Report, and this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, easement holders, assigns, and transferees by the person transferring the interest in accordance with Section 21310a(2)(c) of the NREPA.
- 5. <u>Audits Pursuant to Section 21315 of the NREPA</u>. This Restrictive Covenant is subject to audits in accordance with the provisions of Section 21315 of the NREPA, and such an audit may result in a finding by the MDEQ that this Restrictive Covenant is not protective of the public health, safety, and welfare, and the environment.
- 6. Term of Restrictive Covenant. This Restrictive Covenant shall run with the Property and is binding on the Owner; future owners; and their successors and assigns, lessees, easement holders, and any authorized agents, employees, or persons acting under their direction and control. This Restrictive Covenant shall continue in effect until it is determined that the regulated substances no longer present an unacceptable risk to the public health, safety, or welfare, or the environment. Improper modification or rescission of any restriction necessary to prevent unacceptable exposure to regulated substances may result in the need to perform additional corrective actions by those parties responsible for performing corrective action at the Property or to comply with Section 21304c of the NREPA.
- 7. Enforcement of Restrictive Covenant. The State of Michigan, through the MDEQ, and Federal-Mogul Corporation, Federal Southfield Limited Partnership and Lex Southfield II L.P., and their respective successors and assigns may individually enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of competent jurisdiction.
- Severability. If any provision of this Restrictive Covenant is held to be invalid by any court of
 competent jurisdiction, the invalidity of that provision shall not affect the validity of any other
 provision of this Restrictive Covenant, which shall continue unimpaired and in full force and
 effect.
- 9. <u>Authority to Execute Restrictive Covenant</u>. The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner and represents and certifies that he or she is duly authorized and has been empowered to execute and record this Restrictive Covenant.

IN WITNESS WHEREOF, Federal-Mogul C MDEQ Ref. No, to be executed o RC-KLD-213-15-179	Corporation has caused this Restrictive Covenant, in this _20 th day of October, 2015.
10-10-010-10-11	Federal-Mogul Corporation, a Delaware corporation
	By: Signature
	Name: BRETT PYNNUNEN Print or Type Name Brest PYNNONER
	Its: SUP, General Counsel
The foregoing instrument was acknowledge by <u>bretty nmare</u> (name), <u>SVP</u> Corporation, a Delaware corporation, on bei	d before me on this <u>20th day of October 20 (</u> date) <u>General Gunsel</u> (title) of Federal-Mogul half of the corporation.
	Notary Public Signature
	HEATHER BODEN-CARR Notaty Public - Michigan Oakland County My Commission Expires Feb 9, 2019 Acting in the County of Ocho Par
Prepared by and When recorded return to: Mark T. Bauer, P.E. Director, EHS 27300 W. Eleven Mile Road Southfield, MI 48034	

5

EXHIBIT 1

CONSENT OF GROUND LESSEE

The undersigned is the current ground lessee of the Property and owner of the buildings and other improvements located on the Property. The undersigned hereby consents to the Restrictive Covenant and subjects its property to the Restrictive Covenant. The undersigned agrees to be bound to the terms and conditions of the Restrictive Covenant and hereby subordinates its interest in the Property to the Restrictive Covenant.

FEDERAL SOUTHFIELD LIMITED PARTNERSHIP

By: Lexington Southfield LLC,

its-general partner

By: LRA Manager Corp., its manager

Name: Joseph S. Bonventre

Title: Vice Pro

STATE OF New York
COUNTY OF New York

The foregoing instrument was acknowledged before me on this The South S. Benand P. 2015 by South S. Benand P. Vice President of LRA Manager Corp., a Notation corporation, as manager of Lexington Southfield LLC, a Delawae limited liability company, in its capacity as general partner of Federal Southfield Limited Partnership, a Delawae limited partnership, on behalf of the partnership.

Notary Public Signature GABRIELA W. HEYES Notary Public, State of New York No. 01RE6244378

Qualified in New York County Commission Expires July 5, 2019

EXHIBIT 2

LEGAL DECRIPTION OF PROPERTY, Including for the Overall Parcel and for the Restricted Area

OVERALL PARCEL
(Per ALTA/ACSM Land Title Survey P.E.A. Project #2004-107)

Land in the Northeast 1/4 of Section 21, T1N, R10E, City of Southfield, Oakland County, Michigan, described as commencing at the East 1/4 corner of said section; thence along the east line of said section, N1 °55'30"W, 584.73 feet: thence leaving said section line, S88°04'30"W, 60.00 feet to a point on the westerly line of Lahser Road and the Point of Beginning: Thence continuing S88°04'30"W, 946.51, feet; thence N1°08'18"W, 597.35 feet; thence N88°51 '42"E, 31.00 feet; thence N08'08"W, 490.00 feet; thence S88°51 '42"W, 17.00 feet; thence N1°08'18"W, 72.44 feet to a point in the southerly line of Interstate Highway No. 696 Service Road; thence along said southerly line, S80°46'00"E, 655.65 feet; thence S64°47'03"E, 307.15 feet to a point on the westerly line of Lahser Road; thence along said westerly line, S1°55'30"E, 892.50 feet to the Point of Beginning.

RESTRICTED AREA

Land in the Northeast 1/4 of Section 21, T1N, R1OE, City of Southfield, Oakland County, Michigan, described as commencing at the East 1/4 corner of said Section 21; thence along the East line of said section, N 01°55′30″ W, 1227.58 feet; thence S 88°00′00″ W, 150.00 feet to the Point of Beginning: Thence continuing S 88°00′00″ W, 110.00 feet; thence N 02°00′00″ W, 190.00 feet; thence N 88°00′00″ E, 110.00eet; thence S 02°00′00″ E, 190.00 feet to the Point of Beginning, containing 0.4798 Acres or 20,900.00 sq. ft. of land. This Restricted Area is within the Parcels with the following Tax tdentification Numbers: 76-24-21-202-030 and 76-24-21-202-031.

EXHIBIT 3 - SURVEY OF PROPERTY AND LIMITS OF LAND AND RESOURCE USE RESTRICTIONS

OVERALL PARCEL (Per ALTA/ACSM Land Title Survey P.E.A. Project #2004-107)

Land in the Northeast 1/4 of Section 21, T1N, R10E, City of Southfield, Oakland County, Michigan, described as commencing at the East 1/4 corner of said section; thence along the east line of said section, N1°55'30"W, 584.73 feet: thence leaving said section line, S88°04'30"W, 60.00 feet to a point on the westerly line of Lahser Road and the Point of Beginning: Thence continuing S88°04'30"W, 946.51 feet; thence N1°08'18"W, 597.35 feet; thence N88°51'42"E, 31.00 feet; thence N01°08'18"W, 490.00 feet; thence S88°51'42"W, 17.00 feet; thence N1°08'18"W, 72.44 feet to a point in the southerly line of Interstate Highway No. 696 Service Road; thence along said southerly line, S80°46'00"E, 655.65 feet; thence S64°47'03"E, 307.15 feet to a point on the westerly line of Lahser Road; thence along said westerly line, S1°55'30"E, 892.50 feet to the Point of Beginning.

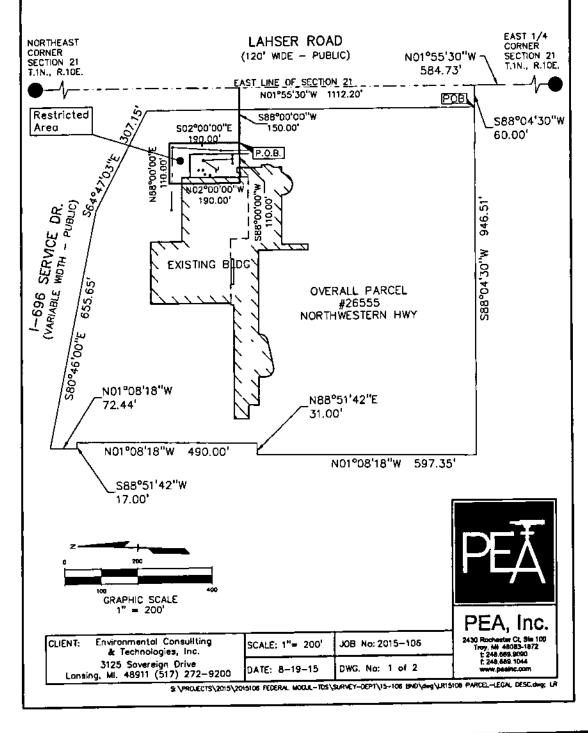


EXHIBIT 3 - SURVEY OF PROPERTY AND LIMITS OF LAND AND RESOURCE USE RESTRICTIONS

LEGAL DESCRIPTION (RESTRICTED AREA)

Land in the Northeast 1/4 of Section 21, T1N, R10E, City of Southfield, Oakland County, Michigan, described as commencing at the East 1/4 corner of said Section 21; thence along the East line of said section, N 01°55'30" W, 1227.58 feet; thence S 88°00'00" W, 150.00 feet to the Point of Beginning: Thence continuing S 88°00'00" W, 110.00 feet; thence N 02°00'00" W, 190.00 feet; thence N 88°00'00" E, 110.00eet; thence S 02°00'00" E, 190.00 feet to the Point of Beginning, containing 0.4798 Acres or 20,900.00 sq. ft. of land.

Ratio/Closure: Closure of unadjusted field observations is not greater than 1 port in 10,000.



David & Cole



CLIENT: Environmental Consulting & Technologies, Inc. 3125 Sovereign Drive Lansing, Ml. 48911 (517) 272-9200 SCALE: 1"= 200' JOB No: 2015-106

DATE: 8-19-15 DWG, No: 2 of 2

PEA, Inc. 2430 Rochester Ct, 8ie 100 Troy, MI 48083-1872 t 246.689, 8030 f: 248.889, 1044 www.peatro.com

CONSENT OF EASEMENT HOLDERS

The Property is subject to a certain Operation, Reciprocal Easement and Expansion Agreement recorded July 1, 1982 in Liber 8205 at Page 440, as amended by First Amendment to Operation, Reciprocal Easement and Expansion Agreement recorded January 26, 1988 in Liber 10284 at Page 620, as further amended by Second Amendment to Operation, Reciprocal Easement and Expansion Agreement recorded April 29, 1988 in Liber 10392 at Page 434, as further amended by Third Amendment to Operation, Reciprocal Easement and Expansion Agreement recorded October 7, 2003 in Liber 31032 at Page 528 (collectively, the "OREA").

The undersigned, with respect to their interest in the Property pursuant to the OREA, agree and consent to the recording of the land and resource use restrictions specified in this Restrictive Covenant and hereby agree that the OREA and the undersigned's property interest pursuant to the OREA is and shall be subject to, and subordinate to, the terms of the Restrictive Covenant.

120

Federal-Mogul Corporation, a Delaware corporation

ву:	
Name	BLETT PYNNUNEW
Its:	SUP. General Connect
Feder	al Southfield Limited Partnership, a <u>lelaurc</u> partnership
Ву:	Lexington Southfield LLC, its-general partner
Ву:	LRA Manager Corp. Its manager
Ву:	164
	Name: Joseph Bonventre Title: Vice Recident
isy. t	outhfield II L.P., a Delaware limited partnership eximple Southfield I Citis yeneral portner LRA Managar Corp., it's make ger
Name:	Joseph Bonyuke
lts:	Vice Prosident

STATE OF MICHIGAN COUNTY OF OAKLAND

The toregoing instrument was acknowledge Breft Tynnonen, the SVP, Gene Delaware corporation, on behalf of the corp	Contract of receivant and an ordination, a
	Notary Public Signature
STATE OF	HEATHER SQUEN-CARR Notary Public - Michigan Oakland County My Commission Expires Feb 9,2019 Acting in the County of Carland
The foregoing instrument was acknown to the Bonuevite Vice Residence of Lexington South capacity as general partner of Federal Spartnership, on behalf of the partnership.	wledged before me on this <u>Otober 2</u> , 2015 by <u>Jent</u> of LRA Manager Corp., a <u>Delawore</u> hfield LLC, a <u>Nelawore</u> limited liability company, in its Southfield Limited Partnership, a <u>Delawore</u> limited
	Notary Public Signature Notary Public Signature Notary Public, State of New York No. 01RE6244378 Qualified in New York County Commission Expires July 5, 2019
The foregoing instrument was acknowledge Socoph Ronworke, the Vive Resident limited partnership, on behalf of the partnership.	the manager of the manager of the manager of the manager of the period of Lex Southfield II L.P., a Delaware ship. For their
	GABRIELA W. REYES Notary Public, State of New York No. 01RE6244378 Qualified in New York County Commission Expires July 5, 2018

ENVICON-01

WALDENKI

ACORD'

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/24/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

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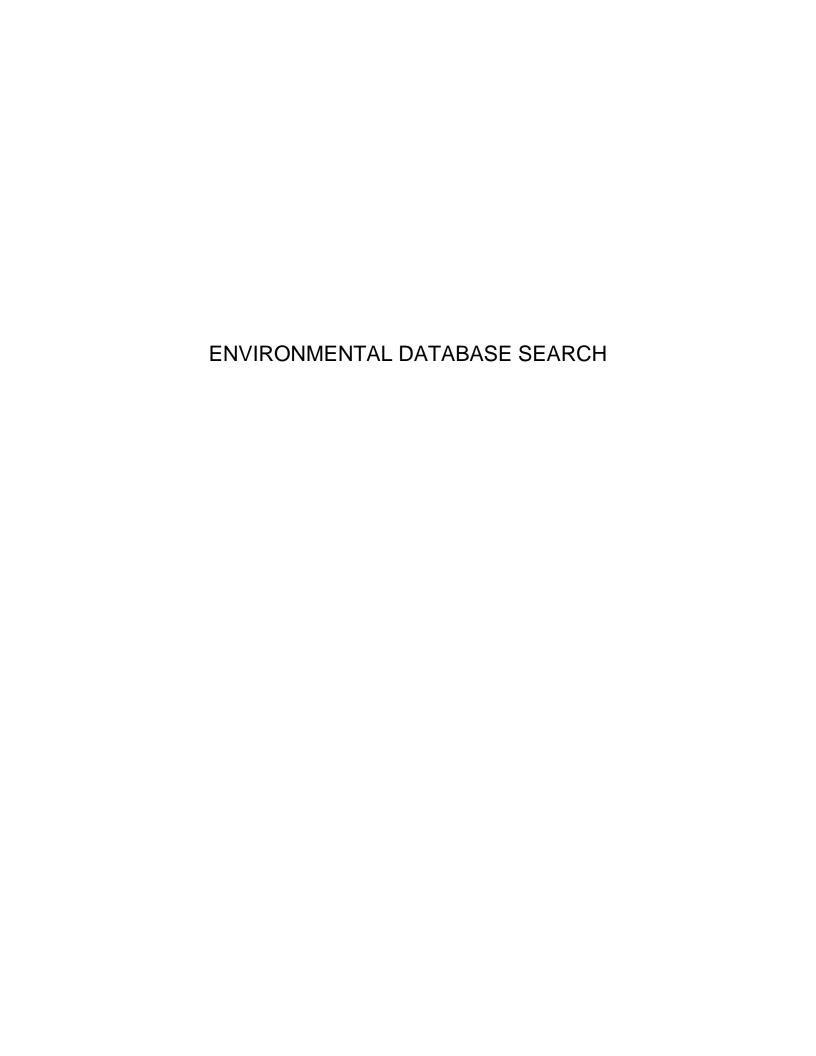
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

For Information Purposes Only

AUTHORIZED REPRESENTATIVE

Appendix D





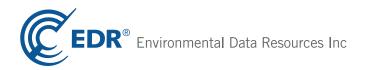
26555 Northwestern Highway

26555 Northwestern Highway Southfield, MI 48033

Inquiry Number: 04590273.2r

April 12, 2016

The EDR Radius Map™ Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

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GEOCHECK ADDENDUM	•

GeoCheck - Not Requested

Thank you for your business.Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

26555 NORTHWESTERN HIGHWAY SOUTHFIELD, MI 48033

COORDINATES

Latitude (North): 42.4825220 - 42° 28' 57.07" Longitude (West): 83.2626820 - 83° 15' 45.65"

Universal Tranverse Mercator: Zone 17 UTM X (Meters): 314022.9 UTM Y (Meters): 4705619.0

Elevation: 686 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 6067816 REDFORD, MI

Version Date: 2014

Southeast Map: 6067818 ROYAL OAK, MI

Version Date: 2014

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20120629, 20120702

Source: USDA

MAPPED SITES SUMMARY

Target Property Address: 26555 NORTHWESTERN HIGHWAY SOUTHFIELD, MI 48033

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	FEDERAL-MOGUEL WORLD	26555 NORTHWESTERN H	MI RGA LUST		TP
A2	FEDERAL-MOGUL CORP	26555 NORTHWESTERN H	RCRA-CESQG, FINDS, NY MANIFEST, ECHO		TP
A3	FEDERAL-MOGUEL WORLD	26555 NORTHWESTERN H	MI LUST, MI AUL, MI INVENTORY, MI AIRS, MI WDS		TP
B4	MARATHON UNIT #2071	26450 LAHSER RD & I-	MI LUST, MI UST	Lower	28, 0.005, East
B5		26450 LAHSER RD	EDR Hist Auto	Lower	46, 0.009, ENE
B6		26400 LAHSER RD	EDR Hist Auto	Lower	46, 0.009, East
7		26200 LAHSER RD	EDR Hist Auto	Lower	54, 0.010, SE
B8	MI DEPT/TRANSPORTATI	M 10 UNDER LASHER RD	RCRA NonGen / NLR	Lower	131, 0.025, ENE
9	26500 NORTHWESTERN H	26500 NORTHWESTERN H	US BROWNFIELDS, RCRA NonGen / NLR, FINDS, ECHO) Higher	309, 0.059, NE
C10	ELAN VILLAGE LLC	26051 LAHSER RD	RCRA NonGen / NLR	Lower	310, 0.059, SSE
C11	ELAN VILLAGE	26051 LAHSER RD	MI LUST, MI UST, MI WDS	Lower	310, 0.059, SSE
12	DETROIT EDISON CO	26801 NORTHWESTERN H	RCRA-CESQG, FINDS, ECHO	Higher	554, 0.105, WNW
C13	MOBIL SERVICE STATIO	22020 10 MILE & LAHS	MI LUST, MI UST	Lower	566, 0.107, SSE
D14	UNIT #22-104	26760 LAHSER RD	MI LUST, MI UST	Higher	620, 0.117, NNE
D15	SUNRISE DONUTS	26760 LAHSER	MI BEA, MI WDS	Higher	620, 0.117, NNE
D16	DAWN DONUTS	26760 LAHSER RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	620, 0.117, NNE
D17	SUNRISE DONUTS	26760 LAHSER	MI INVENTORY	Higher	620, 0.117, NNE
E18	EATON CORPORATION	26201 NORTHWESTERN H	MI AST	Lower	1183, 0.224, ESE
E19	EATON RESEARCH CENTE	26201 NORTHWESTERN H	RCRA-SQG, MI LUST, MI UST, US AIRS, FINDS, NY	Lower	1183, 0.224, ESE
20	USPS - MAIN POST OFF	22200 W 11 MILE RD	MI LUST, MI UST	Higher	1283, 0.243, North
F21	CVS STORE #08034	26980 LAHSER ROAD	MI BEA	Higher	1328, 0.252, NNE
F22	CVS STORE #08034	26980 LAHSER ROAD	MI INVENTORY	Higher	1328, 0.252, NNE
F23	WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	MI BEA, MI WDS	Higher	1409, 0.267, NNE
F24	WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	MI INVENTORY	Higher	1409, 0.267, NNE
F25	WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	MI INVENTORY	Higher	1409, 0.267, NNE
F26	RED O INC/MOBIL 03-K	27015 LAHSER ROAD	MI AUL, MI SPILLS	Higher	1414, 0.268, NNE
F27	RED O INC	27015 LAHSER RD	MI LUST, MI UST, MI AUL, MI INVENTORY, MI WDS	Higher	1414, 0.268, NNE
F28	ELEVEN MILE ROAD COM	21851, 21887, & 2191	MI BEA	Higher	1447, 0.274, NNE
F29	SHELL (LASHER CONVEN	27050 LAHSER RD	MI LUST, MI UST, MI INVENTORY, MI BEA, MI WDS	Higher	1496, 0.283, NNE
G30	HARVARD ROW PLAZA PR	21700 - 21800 WEST 1	MI INVENTORY	Higher	1703, 0.323, NE
G31	HARVARD ROW PLAZA PR	21700 - 21800 WEST 1	MI BEA	Higher	1703, 0.323, NE
G32	NW - HARVARD ROW, LL	21700-21800 WEST ELE	MI BEA	Higher	1703, 0.323, NE
G33	NW - HARVARD ROW, LL	21700-21800 WEST ELE	MI INVENTORY	Higher	1703, 0.323, NE
34	SOUTHFIELD CO (M5413	25189 LAHSER ROAD	MI LUST, MI UST, MI AIRS, MI WDS	Lower	2245, 0.425, South
35	KNOB IN THE WOODS AP	20703 KENSINGTON CT	MI LUST, MI UST, MI WDS	Lower	2375, 0.450, ENE

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
FEDERAL-MOGUEL WORLD 26555 NORTHWESTERN H SOUTHFIELD, MI	MI RGA LUST Facility ID: 50005609	N/A
FEDERAL-MOGUL CORP 26555 NORTHWESTERN H SOUTHFIELD, MI 48033	RCRA-CESQG EPA ID:: MID006557045	MID006557045
	FINDS Registry ID:: 110003584933	
	NY MANIFEST EPA ID: MID006557045	
	ECHO	
FEDERAL-MOGUEL WORLD 26555 NORTHWESTERN H SOUTHFIELD, MI 48034	MI LUST Release Status: Open Substance Release: Unknown Facility Id: 50005609	N/A
	MI AUL Facility ID: 50005609	
	MI INVENTORY Facility ID: 50005609	
	MI AIRS State Registration Id: A5098	
	MI WDS WMD ld: 394315 Site ld: MID006557045	

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list	
NPL	. National Priority List

Proposed NPL..... Proposed National Priority List Sites NPL LIENS..... Federal Superfund Liens Federal Delisted NPL site list Delisted NPL..... National Priority List Deletions Federal CERCLIS list FEDERAL FACILITY..... Federal Facility Site Information listing SEMS...... Superfund Enterprise Management System Federal CERCLIS NFRAP site list SEMS-ARCHIVE...... Superfund Enterprise Management System Archive Federal RCRA CORRACTS facilities list CORRACTS..... Corrective Action Report Federal RCRA non-CORRACTS TSD facilities list RCRA-TSDF...... RCRA - Treatment, Storage and Disposal Federal RCRA generators list RCRA-LQG...... RCRA - Large Quantity Generators Federal institutional controls / engineering controls registries Land Use Control Information System US ENG CONTROLS..... Engineering Controls Sites List US INST CONTROL..... Sites with Institutional Controls Federal ERNS list ERNS..... Emergency Response Notification System State- and tribal - equivalent CERCLIS NPL list. State and tribal landfill and/or solid waste disposal site lists MI SWF/LF..... Solid Waste Facilities Database State and tribal leaking storage tank lists INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land State and tribal registered storage tank lists

FEMA UST...... Underground Storage Tank Listing

INDIAN UST...... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

MI BROWNFIELDS..... Brownfields and UST Site Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

MI HIST LF..... Inactive Solid Waste Facilities

MI SWRCY...... Recycling Facilities

INDIAN ODI...... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

MI PART 201 Part 201 Site List

MI CDL..... Clandestine Drug Lab Listing MI DEL PART 201..... Delisted List of Contaminated Sites US CDL_____ National Clandestine Laboratory Register

Local Land Records

MI LIENS..... Lien List

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

FUDS..... Formerly Used Defense Sites DOD...... Department of Defense Sites

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

2020 COR ACTION.......... 2020 Corrective Action Program List

ROD...... Records Of Decision

RMP..... Risk Management Plans

RAATS______RCRA Administrative Action Tracking System

PRP...... Potentially Responsible Parties PADS..... PCB Activity Database System

ICIS...... Integrated Compliance Information System

Act)/TSCA (Toxic Substances Control Act)

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER...... PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS..... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

UMTRA Uranium Mill Tailings Sites
LEAD SMELTERS Lead Smelter Sites
US MINES Mines Master Index File
MI COAL ASH Coal Ash Disposal Sites
MI DRYCLEANERS Drycleaning Establishments

MI Financial Assurance Information Listing

MI LEAD..... Lead Safe Housing Registry
MI NPDES.... List of Active NPDES Permits

MI UIC...... Underground Injection Wells Database FUELS PROGRAM..... EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants EDR Hist Cleaner.... EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in bold italics are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/09/2015 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EATON RESEARCH CENTE	26201 NORTHWESTERN H	ESE 1/8 - 1/4 (0.224 mi.)	E19	38

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 12/09/2015 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DETROIT EDISON CO	26801 NORTHWESTERN H	WNW 0 - 1/8 (0.105 mi.)	12	29

State and tribal leaking storage tank lists

MI LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's Leaking Underground Storage Tank (LUST) Database.

A review of the MI LUST list, as provided by EDR, and dated 02/01/2016 has revealed that there are 10 MI LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIT #22-104 Release Status: Closed Substance Release: Gasoline,Used Oil Facility Id: 00019038	26760 LAHSER RD	NNE 0 - 1/8 (0.117 mi.)	D14	33
USPS - MAIN POST OFF Release Status: Closed Substance Release: Gasoline,Unknown Facility Id: 00012726	22200 W 11 MILE RD	N 1/8 - 1/4 (0.243 mi.)	20	52
RED O INC	27015 LAHSER RD	NNE 1/4 - 1/2 (0.268 mi.)	F27	56

NNE 1/4 - 1/2 (0.283 mi.) F29

60

27050 LAHSER RD

Release Status: Closed Substance Release: Gasoline Facility Id: 00016676

SHELL (LASHER CONVEN

Release Status: Open

Substance Release: Gasoline, Unknown

Facility Id: 00010382

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARATHON UNIT #2071 Release Status: Closed Facility Id: 00018139	26450 LAHSER RD & I-	E 0 - 1/8 (0.005 mi.)	B4	13
ELAN VILLAGE Release Status: Closed Substance Release: Diesel Facility Id: 00041345	26051 LAHSER RD	SSE 0 - 1/8 (0.059 mi.)	C11	27
MOBIL SERVICE STATIO Release Status: Closed Facility Id: 00016673	22020 10 MILE & LAHS	SSE 0 - 1/8 (0.107 mi.)	C13	31
EATON RESEARCH CENTE SOUTHFIELD CO (M5413 Release Status: Closed Substance Release: Kerosene,Kerosene Substance Release: Kerosene Facility Id: 00011783	26201 NORTHWESTERN H 25189 LAHSER ROAD	ESE 1/8 - 1/4 (0.224 mi.) S 1/4 - 1/2 (0.425 mi.)	E19 34	38 65
KNOB IN THE WOODS AP Release Status: Closed Substance Release: Unknown Facility Id: 00005338	20703 KENSINGTON CT	ENE 1/4 - 1/2 (0.450 mi.)	35	68

State and tribal registered storage tank lists

MI UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Michigan UST database.

A review of the MI UST list, as provided by EDR, and dated 11/03/2015 has revealed that there are 6 MI UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIT #22-104 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00019038	26760 LAHSER RD	NNE 0 - 1/8 (0.117 mi.)	D14	33
USPS - MAIN POST OFF Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00012726	22200 W 11 MILE RD	N 1/8 - 1/4 (0.243 mi.)	20	52
Lower Elevation	Address	Direction / Distance	Map ID	Page
MARATHON UNIT #2071	26450 LAHSER RD & I-	E 0 - 1/8 (0.005 mi.)	B4	13

Tank Status: Removed from Ground Tank Status: Currently In Use Tank Status: Temporarily out of Use Facility Type: ACTIVE Facility Id: 00018139 **ELAN VILLAGE** 26051 LAHSER RD SSE 0 - 1/8 (0.059 mi.) C11 27 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00041345 **MOBIL SERVICE STATIO** 22020 10 MILE & LAHS SSE 0 - 1/8 (0.107 mi.) C13 31 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00016673 **EATON RESEARCH CENTE** 26201 NORTHWESTERN H ESE 1/8 - 1/4 (0.224 mi.) 38 E19

MI AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Natural Resources' Michigan AST database.

A review of the MI AST list, as provided by EDR, and dated 01/26/2016 has revealed that there is 1 MI AST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EATON CORPORATION Facility Id: 91063246 List Status: ACTIVE Tank Status: Currently In Use	26201 NORTHWESTERN H	ESE 1/8 - 1/4 (0.224 mi.)	E18	37

State and tribal institutional control / engineering control registries

MI AUL: A listing of sites with institutional and/or engineering controls in place.

A review of the MI AUL list, as provided by EDR, and dated 12/09/2015 has revealed that there are 2 MI AUL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RED O INC/MOBIL 03-K Facility ID: 00016676	27015 LAHSER ROAD	NNE 1/4 - 1/2 (0.268 mi.)	F26	55
RED O INC Facility ID: 00016676	27015 LAHSER RD	NNE 1/4 - 1/2 (0.268 mi.)	F27	56

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 12/22/2015 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
26500 NORTHWESTERN H	26500 NORTHWESTERN H	NE 0 - 1/8 (0.059 mi.)	9	20

Local Lists of Hazardous waste / Contaminated Sites

MI INVENTORY: The Inventory of Facilities has three data sources: Facilities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) identified through state funded or private party response activities (Projects): Facilities under Part 213, Leaking Underground Storage Tanks of the NREPA; and Facilities identified through submittals of Baseline Environmental Assessments (BEA) submitted pursuant to Part 201 or Part 213 of the NREPA. The Part 201 Projects Inventory does not include all of the facilities that are subject to regulation under Part 201 because owners are not required to inform the Department of Environmental Quality (DEQ) about the facilities and can pursue cleanup independently. Facilities that are not known to DEQ are not on the Inventory, nor are locations with releases that resulted in low environmental impact. Part 213 facilities listed here may have more than one release; a list of releases for which corrective actions have been completed and list of releases for which corrective action has not been completed is located on the Leaking Underground Storage Tanks Site Search webpage. The DEQ may or may not have reviewed and concurred with the conclusion that the corrective actions described in a closure report meets criteria. A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the MI INVENTORY list, as provided by EDR, and dated 01/25/2016 has revealed that there are 8 MI INVENTORY sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page	
SUNRISE DONUTS	26760 LAHSER	NNE 0 - 1/8 (0.117 mi.)	D17	37	
CVS STORE #08034	26980 LAHSER ROAD	NNE 1/4 - 1/2 (0.252 mi.)	F22	53	
WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	NNE 1/4 - 1/2 (0.267 mi.)	F24	54	
WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	NNE 1/4 - 1/2 (0.267 mi.)	F25	55	
RED O INC Facility ID: 00016676	27015 LAHSER RD	NNE 1/4 - 1/2 (0.268 mi.)	F27	56	
SHELL (LASHER CONVEN Facility ID: 00010382	27050 LAHSER RD	NNE 1/4 - 1/2 (0.283 mi.)	F29	60	
HARVARD ROW PLAZA PR NW - HARVARD ROW, LL	21700 - 21800 WEST 1 21700-21800 WEST ELE	NE 1/4 - 1/2 (0.323 mi.) NE 1/4 - 1/2 (0.323 mi.)	G30 G33	64 65	

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or

dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/09/2015 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page 20 35	
26500 NORTHWESTERN H DAWN DONUTS	26500 NORTHWESTERN H 26760 LAHSER RD	NE 0 - 1/8 (0.059 mi.) NNE 0 - 1/8 (0.117 mi.)	9 D16		
Lower Elevation	Address	Direction / Distance	Map ID	Page	

MI BEA: A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the MI BEA list, as provided by EDR, and dated 08/21/2013 has revealed that there are 7 MI BEA sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address Direction / Distance			Page	
SUNRISE DONUTS	26760 LAHSER	NNE 0 - 1/8 (0.117 mi.)	D15	35	
CVS STORE #08034	26980 LAHSER ROAD	NNE 1/4 - 1/2 (0.252 mi.)	F21	53	
WOODWARD DETROIT CVS	21911 WEST ELEVEN MI	NNE 1/4 - 1/2 (0.267 mi.)	F23	54	
ELEVEN MILE ROAD COM	21851, 21887, & 2191	NNE 1/4 - 1/2 (0.274 mi.)	F28	60	
SHELL (LASHER CONVEN	27050 LAHSER RD	NNE 1/4 - 1/2 (0.283 mi.)	F29	60	
HARVARD ROW PLAZA PR	21700 - 21800 WEST 1	NE 1/4 - 1/2 (0.323 mi.)	G31	64	
NW - HARVARD ROW, LL	21700-21800 WEST ELE	NE 1/4 - 1/2 (0.323 mi.)	G32	65	

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, has revealed that there is 1 NY MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page	
EATON RESEARCH CENTE	26201 NORTHWESTERN H	ESE 1/8 - 1/4 (0.224 mi.)	E19	38	
EPA ID: MID098684871					

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR

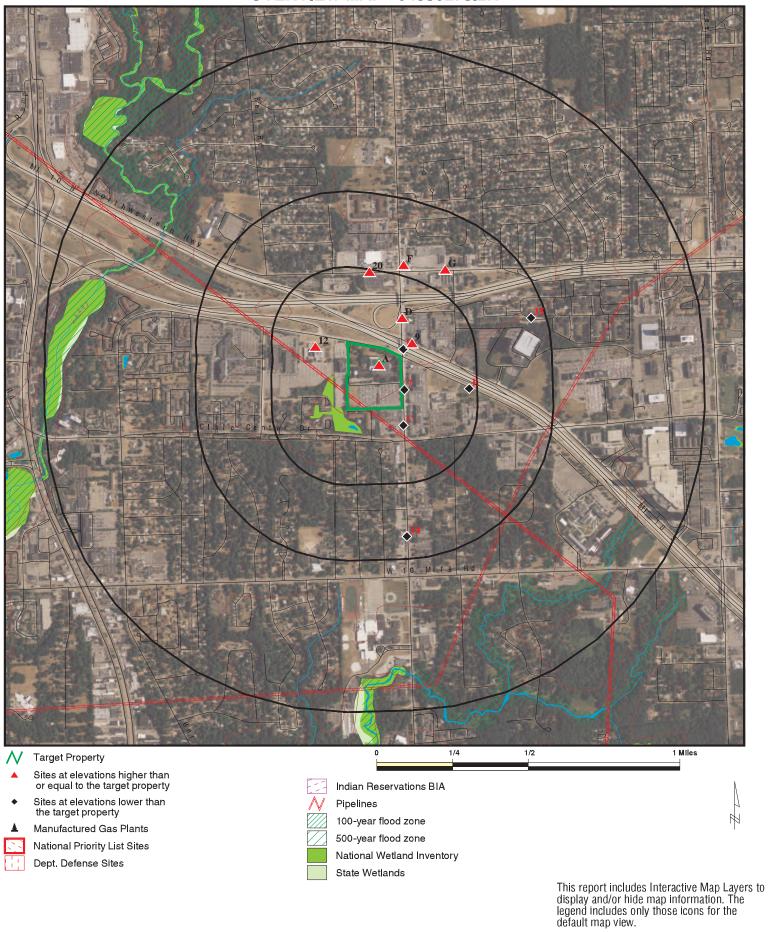
researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 3 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page	
Not reported	26450 LAHSER RD	ENE 0 - 1/8 (0.009 mi.)	B5	17	
Not reported	26400 LAHSER RD	E 0 - 1/8 (0.009 mi.)	B6	18	
Not reported	26200 LAHSER RD	SE 0 - 1/8 (0.010 mi.)	7	18	

There were no unmapped sites in this report.

OVERVIEW MAP - 04590273.2R



CLIENT: CONTACT: PM Environmental, Inc. Kristen King

INQUIRY #: 04590273.2r

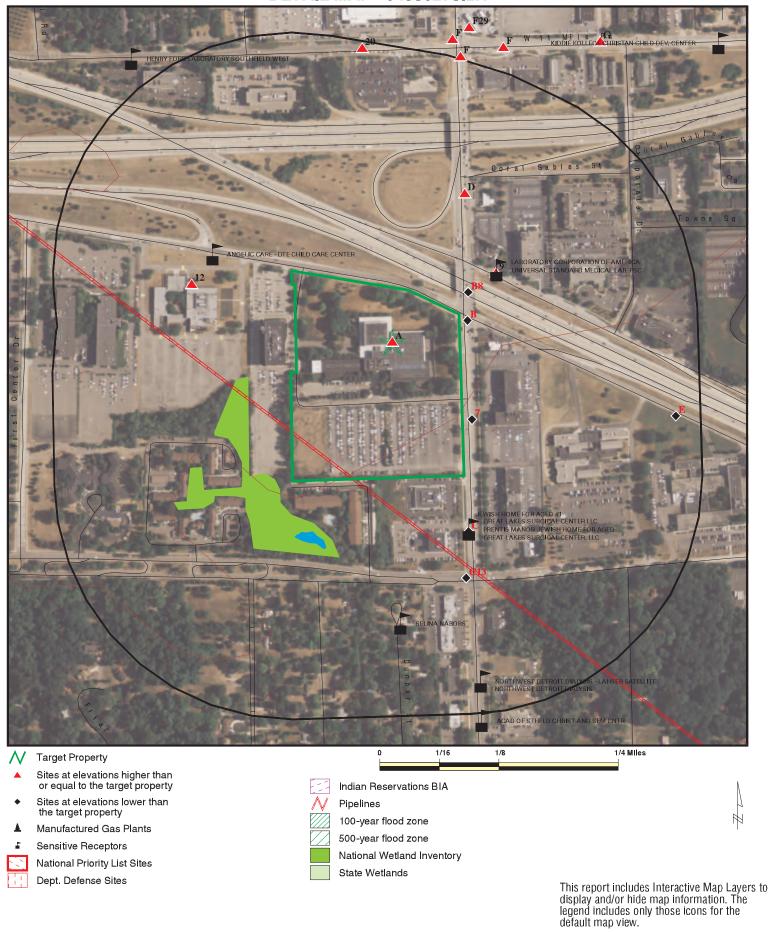
DATE: April 12, 2016 6:36 pm

26555 Northwestern Highway 26555 Northwestern Highway ADDRESS: Southfield MI 48033 LAT/LONG: 42.482522 / 83.262682

SITE NAME:

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DETAIL MAP - 04590273.2R



SITE NAME: 26555 Northwestern Highway ADDRESS: 26555 Northwestern Highway

Southfield MI 48033 LAT/LONG: 42.482522 / 83.262682 PM Environmental, Inc.

CLIENT: CONTACT: Kristen King INQUIRY #: 04590273.2r

DATE: April 12, 2016 6:41 pm

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted	
STANDARD ENVIRONMENTAL RECORDS									
Federal NPL site list									
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0	
Federal Delisted NPL site	e list								
Delisted NPL	1.000		0	0	0	0	NR	0	
Federal CERCLIS list									
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0	
Federal CERCLIS NFRAI	P site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0	
Federal RCRA CORRACTS facilities list									
CORRACTS	1.000		0	0	0	0	NR	0	
Federal RCRA non-COR	RACTS TSD f	acilities list							
RCRA-TSDF	0.500		0	0	0	NR	NR	0	
Federal RCRA generator	s list								
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250	1	0 0 1	0 1 0	NR NR NR	NR NR NR	NR NR NR	0 1 2	
Federal institutional con engineering controls reg									
LUCIS US ENG CONTROLS US INST CONTROL	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0	
Federal ERNS list									
ERNS	TP		NR	NR	NR	NR	NR	0	
State- and tribal - equiva	lent CERCLIS	3							
MI SHWS	1.000		0	0	0	0	NR	0	
State and tribal landfill a solid waste disposal site									
MI SWF/LF	0.500		0	0	0	NR	NR	0	
State and tribal leaking s	storage tank l	ists							
MI LUST INDIAN LUST	0.500 0.500	1	4 0	2 0	4 0	NR NR	NR NR	11 0	
State and tribal registere	ed storage tan	ık lists							
FEMA UST	0.250		0	0	NR	NR	NR	0	

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MI UST MI AST INDIAN UST	0.250 0.250 0.250		4 0 0	2 1 0	NR NR NR	NR NR NR	NR NR NR	6 1 0
State and tribal institutional control / engineering control registries								
MI AUL	0.500	1	0	0	2	NR	NR	3
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfie	lds sites							
MI BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMEN	TAL RECORDS	3						
		-						
Local Brownfield lists								
US BROWNFIELDS	0.500		1	0	0	NR	NR	1
Local Lists of Landfill / S Waste Disposal Sites	Colid							
MI HIST LF MI SWRCY INDIAN ODI ODI DEBRIS REGION 9	0.500 0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0 0	0 0 0 0	NR NR NR NR NR	NR NR NR NR NR	0 0 0 0 0
Local Lists of Hazardous Contaminated Sites	waste /							
US HIST CDL MI PART 201 MI INVENTORY MI CDL MI DEL PART 201 US CDL	TP 1.000 0.500 TP 1.000 TP	1	NR 0 1 NR 0 NR	NR 0 0 NR 0 NR	NR 0 7 NR 0 NR	NR 0 NR NR 0 NR	NR NR NR NR NR	0 0 9 0 0
Local Land Records								
MI LIENS LIENS 2	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Records of Emergency R	Release Repoi	rts						
HMIRS MI SPILLS	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Other Ascertainable Rec	ords							
RCRA NonGen / NLR FUDS DOD SCRD DRYCLEANERS US FIN ASSUR	0.250 1.000 1.000 0.500 TP		4 0 0 0 NR	0 0 0 0 NR	NR 0 0 0 NR	NR 0 0 NR NR	NR NR NR NR NR	4 0 0 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Database EPA WATCH LIST 2020 COR ACTION TSCA TRIS SSTS ROD RMP RAATS PRP PADS ICIS FTTS MLTS COAL ASH DOE COAL ASH EPA PCB TRANSFORMER RADINFO HIST FTTS DOT OPS CONSENT INDIAN RESERV FUSRAP UMTRA LEAD SMELTERS US AIRS US MINES FINDS MI AIRS MI BEA MI COAL ASH MI DRYCLEANERS MI Financial Assurance MI LEAD NY MANIFEST MI NPDES MI UIC MI WDS FUELS PROGRAM			NR O R R R R R R R NR O R NR	1/8 - 1/4 NO NRR O RR NRR O RR NRR O NRR	1/4 - 1/2 NR NR NR O RR RR NN O NR NR NR O NR NR NR O NR NR NR NR NR NR NR NR NR NR NR NR NR	1/2 - 1 NR NR R NR NR NR NR NR NR NR NR NR NR NR	1 RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	
ECHO	TP	1	NR	NR	NR	NR	NR	1
EDR Exclusive Records	EDR HIGH RISK HISTORICAL RECORDS							
EDR Exclusive Records EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto EDR Hist Cleaner	0.125 0.125		3 0	NR NR	NR NR	NR NR	NR NR	3 0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Go	vt. Archives							
MI RGA PART 201	TP		NR	NR	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MI RGA LF MI RGA LUST	TP TP	1	NR NR	NR NR	NR NR	NR NR	NR NR	0 1
- Totals		10	19	7	19	0	0	55

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site **EPA ID Number** Database(s)

Α1 FEDERAL-MOGUEL WORLD HEADQUARTERS MI RGA LUST S115675075 **Target**

26555 NORTHWESTERN HWY N/A

SOUTHFIELD, MI **Property**

Site 1 of 3 in cluster A

RGA LUST: Actual:

2012 FEDERAL-MOGUEL WORLD HEADQUARTERS 26555 NORTHWESTERN HWY 686 ft. 26555 NORTHWESTERN HWY 2011 FEDERAL-MOGUEL WORLD HEADQUARTERS 2010 FEDERAL-MOGUEL WORLD HEADQUARTERS 26555 NORTHWESTERN HWY FEDERAL-MOGUEL WORLD HEADQUARTERS 26555 NORTHWESTERN HWY 2009

> 2008 FEDERAL-MOGUEL WORLD HEADQUARTERS 26555 NORTHWESTERN HWY 26555 NORTHWESTERN HWY FEDERAL-MOGUEL WORLD HEADQUARTERS 2007

A2 FEDERAL-MOGUL CORP RCRA-CESQG 1000213231 **26555 NORTHWESTERN HWY Target FINDS** MID006557045 SOUTHFIELD, MI 48033 **Property NY MANIFEST**

Site 2 of 3 in cluster A

RCRA-CESQG: Actual:

686 ft. Date form received by agency: 10/21/2013

Facility name: FEDERAL-MOGUL CORP Facility address: 26555 NORTHWESTERN HWY

SOUTHFIELD, MI 48033

EPA ID: MID006557045 Contact: **BRIAN J ECKBLAD** Contact address: Not reported

Not reported

Contact country: US

Contact telephone: (248) 354-1744

BRIAN.ECKBLAD@FEDERALMOGUL.COM Contact email:

EPA Region:

Classification: Conditionally Exempt Small Quantity Generator

Description: Handler: generates 100 kg or less of hazardous waste per calendar

> month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting

from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from

the cleanup of a spill, into or on any land or water, of acutely

hazardous waste

Owner/Operator Summary:

FEDERAL MOGUL CORPORATION Owner/operator name:

Owner/operator address: Not reported Not reported Owner/operator country: Not reported

Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Owner Owner/Op start date: 01/01/1967 Owner/Op end date: Not reported **ECHO**

Distance Elevation S

Site Database(s) EPA ID Number

FEDERAL-MOGUL CORP (Continued)

1000213231

EDR ID Number

Owner/operator name: FEDERAL MOGUL CORPORATION

Owner/operator address: Not reported Not reported Owner/operator country: Not reported Not repor

Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Operator Owner/Op start date: 01/01/1967 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: Nο User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Universal Waste Summary:

Waste type: Batteries
Accumulated waste on-site: Yes
Generated waste on-site: Yes

. Waste code: D001

Waste name: IGNITABLE WASTE

Historical Generators:

Date form received by agency: 07/17/1985

Site name: FEDERAL-MOGUL CORP
Classification: Not a generator, verified

Waste code: D001

. Waste name: IGNITABLE WASTE

Violation Status: No violations found

FINDS:

Registry ID: 110003584933

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Direction Distance

Elevation Site Database(s) EPA ID Number

FEDERAL-MOGUL CORP (Continued)

1000213231

EDR ID Number

NY MANIFEST:

EPA ID: MID006557045

Country: USA

Location Address 1: 26555 NORTHWESTERN HIGHWAY

Location Address 2: Not reported Location City: SOUTHFIELD

Location State: MI
Location Zip Code: 48034
Location Zip Code 4: Not reported

Mailing Info:

Name: FEDERAL MOGUL Contact: JAMES E. DENNIS

Address: 26555 NORTHWESTERN HIGHWAY

City/State/Zip: SOUTHFIELD, MI 48034

Country: USA

Phone: 313-354-9822

Manifest:

Document ID: NYA2567439

Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

Trans1 State ID: IN2658J
Trans2 State ID: Not reported
Generator Ship Date: 01/21/1986
Trans1 Recv Date: 01/21/1986

Trans2 Recv Date: / /

TSD Site Recv Date: 02/11/1986
Part A Recv Date: 01/27/1986
Part B Recv Date: 02/20/1986
Generator EPA ID: MID006557045
Trans1 EPA ID: GAD042097261
Trans2 EPA ID: Not reported
TSDF ID: NYD049836679

Waste Code: B007 - OTHER MISCELLANEOUS PCB WASTES

Quantity: 00075 Units: P - Pounds

Number of Containers: 001

Container Type: DM - Metal drums, barrels

Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100 Year: 1986

Document ID: NYB5024403 Manifest Status: Completed copy

Trans1 State ID: 0075 Trans2 State ID: 55113DNY Generator Ship Date: 05/23/1994 Trans1 Recv Date: 05/23/1994 Trans2 Recv Date: 05/25/1994 TSD Site Recv Date: 06/07/1994 Part A Recv Date: 06/02/1994 Part B Recv Date: 06/15/1994 Generator EPA ID: MID006557045 Trans1 EPA ID: ILD099202681 Trans2 EPA ID: NYD097644801

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

FEDERAL-MOGUL CORP (Continued)

1000213231

S107696506

N/A

TSDF ID: NYD049836679

D006 - CADMIUM 1.0 MG/L TCLP Waste Code:

00070 Quantity: Units: P - Pounds Number of Containers: 001

DF - Fiberboard or plastic drums (glass) Container Type:

Handling Method: L Landfill. Specific Gravity: 100

Waste Code: B004 - PCB ARTICLES WITH 50 PPM BUT < 500 PPM

Quantity: 00020

Units: K - Kilograms (2.2 pounds)

Number of Containers: 001

Container Type: DF - Fiberboard or plastic drums (glass)

Handling Method: L Landfill. Specific Gravity: Year: 1994

ECHO:

Envid: 1000213231 Registry ID: 110003584933

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110003584933

FEDERAL-MOGUEL WORLD HEADQUARTERS

А3 **Target 26555 NORTHWESTERN HWY** SOUTHFIELD, MI 48034 **Property**

MI AUL MI INVENTORY **MI AIRS** MI WDS

MI LUST

Site 3 of 3 in cluster A

Actual: 686 ft.

LUST:

Facility ID: 50005609

STATE OF MICHIGAN Source: Owner Name: Federal-Mogul Corp Owner Address: 26555 Northwestern Hwy Owner City,St,Zip: Southfield, MI 48034-2146

Owner Contact: Not reported Owner Phone: (248) 354-7700

Country: USA

District: Region 1 - SE Michigan District Office Site Name: Federal-Moguel World Headquarters

Latitude: 42.48243 Longitude: -83.26247 Date of Collection: 10/22/2007 Method of Collection: Interpolation-Map

Accuracy: 40 Accuracy Value Unit: **FEET** Horizontal Data: NAD83 Point Line Area: **POINT** Desc Category: Not reported

Leak Number: C-0080-07 Release Date: 04/05/2007 Substance Released: Unknown Release Status: Open Release Closed Date: Not reported

AUL:

Pending Status: Site Name: Not reported

Direction Distance Elevation

ce EDR ID Number on Site Database(s) EPA ID Number

FEDERAL-MOGUEL WORLD HEADQUARTERS (Continued)

S107696506

Property: On-Site RC Land Use Restriction Type: Program Type: Part 213 Program Support Assigned User: Not reported Program Support Assigned Date: Not reported Legal Description Of Property: Not reported Based On The Deq Ref #: 11121315179 MDEQ Reference Number: RC-RRD-213-15-179

Property Or Description Restricted Area: Not reported Lead Division: RRD
File Name Of Hyperlinked Legal Doc: Not reported Mapped Polygons Area In Acres: Not reported Mapped Polygons Area In Square Miles: Not reported Date Data Entry Started: Not reported Date Data Entry Finished: Not reported

Individual Or Staff Assoc With The Mapping:

Program Used To Map Restricted Features:

Not reported
Date Legal Paperwork Stamped/Filed/Register Of Deeds:
Not reported

Commercial I Land Use Restriction: Commercial li Land Use Restriction: 0 Commercial lii Land Use Restriction: 0 Commercial Iv Land Use Restriction: 0 Industrial Land Use Restriction: 0 Residential Land Use Restriction: 0 Recreational Land Use Restriction: 0 Multiple Land-Use Restrictions: 0 Site Specific Restrictions: n Groundwater Consumption Restrictions: 0 **Groundwater Contact Restrictions:** Special Well Construction Requirements: 0 Special Building Restrictions: **Excavation And Soil Movement Restrictions:**

Excavation And Soil Movement Restrictions: 0
Soil Movement Requirements: 0
There Is A Restriction On All Construction: 0
Monitoring Well Protected, No Tampering Or Removal: 0
There Is An Exposure Barrier In Place: 0
There Is A Health And Safety Plan: 0
There Is A Permanent Marker On The Site: 0

Map Comments: Not reported

Comment: 20150724 - Reference number was requested by Fredrick J. Dindoffer of

Bodman Law - Nick Ekel

INVENTORY:

Bea Number: Not reported Township: Not reported District: Southeast MI Data Source: Part 213 Latitude: 42.48244 Longitude: -83.26248

AIRS:

State Registration Number: A5098
Naics Code: Not reported
Contact Name: BILL WYLONIS
Contact Phone: 2483541744

Contact Address: FEDERAL-MOGUL CORPORATION

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

FEDERAL-MOGUEL WORLD HEADQUARTERS (Continued)

S107696506

Contact Address 2: 26555 NORTHWESTERN HWY SOUTHFIELD, MI 48034 Contact City, St, Zip:

Permit Number: 159-04 Date Received: 06/25/2004

Application Reason: GENERAL PTI - DIESEL FUEL-FIRED ENGINE GENERATORS

Record Type: Not reported State County FIPS: Not reported Facility Category: Not reported SIC Primary: Not reported Tribal Code: Not reported Facility Status: Not reported Supplemental Location Text: Not reported Business Name: Not reported Principal Product: Not reported Principal Product Description: Not reported

UTM Zone (Geo Coordinates Universal Transverse Mercator System): Not reported

UTM Horizontal Coord: Not reported **UTM Vertical Coord:** Not reported Mailing Name: Not reported Mailing Contact Person: Not reported Mailing Street: Not reported Mailing City: Not reported Mailing State: Not reported Mailing Zip: Not reported Mailing Zip 4 Extension: Not reported Compliance Person: Not reported Compliance Area Code: Not reported Compliance Phone Number: Not reported **Emission Inventory Contact Person:** Not reported El Contact Area Code: Not reported El Contact Phone Number: Not reported Permit Contact Person: Not reported Permit Contact Person Area Code: Not reported Permit Contact Person Phone Number: Not reported Not reported Federal Employer Id Number: # Of Employees: Not reported Reporting Year: Not reported Date Record Was Created: Not reported

WDS:

Site Id: MID006557045 WMD Id: 394315

Site Specific Name: FEDERAL-MOGUL CORP Mailing Address: 26555 NORTHWESTERN HWY

Mailing City/State/Zip: 48033 Mailing County: OAKLAND

MARATHON UNIT #2071 U003324030 MI LUST 26450 LAHSER RD & I-696 MI UST N/A

East < 1/8 SOUTHFIELD, MI 48034 0.005 mi.

Site 1 of 4 in cluster B 28 ft. LUST:

Relative: Facility ID: 00018139 Lower

STATE OF MICHIGAN Source: Actual: Southfield Fuel Stop Owner Name:

684 ft.

В4

Direction Distance

Elevation Site Database(s) EPA ID Number

MARATHON UNIT #2071 (Continued)

U003324030

EDR ID Number

Owner Address: 26450 Lahser Rd

Owner City, St, Zip: Southfield, MI 48034-2694

Owner Contact: Not reported Owner Phone: (248) 356-7009

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Marathon #2072
Latitude: 42.48250
Longitude: -83.26114
Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number:C-1316-90Release Date:07/23/1990Substance Released:Not reportedRelease Status:ClosedRelease Closed Date:09/26/1996

UST:

Facility ID: 00018139 Facility Type: ACTIVE

Owner Name: SOUTHFIELD FUEL STOP
Owner Address: 26450 LAHSER RD

Owner City,St,Zip: SOUTHFIELD, MI 48034-2694

Owner Country: USA
Owner Contact: Not reported
Owner Phone: (248) 356-7009
Contact: Tarif Hamade
Contact Phone: (248) 356-7009
Date of Collection: 01/11/2001
Accuracy: 100
Accuracy Value Unit: FEET

Accuracy Value Unit: FEET Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48250 Longitude: -83.26114

Tank ID: A

Tank Status: Removed from Ground

Capacity: 4000
Product: Gasoline
Install Date: 05/01/1972
Remove Date: 08/16/1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel, Cathodically Protected Steel

Impressed Device: No

Direction Distance Elevation

Elevation Site Database(s) EPA ID Number

MARATHON UNIT #2071 (Continued)

U003324030

EDR ID Number

Tank ID: B

Tank Status: Removed from Ground

Capacity: 10000
Product: Gasoline
Install Date: 05/01/1972
Remove Date: 08/16/1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel, Cathodically Protected Steel

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

Capacity: 10000
Product: Gasoline
Install Date: 05/01/1972
Remove Date: 08/16/1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel, Cathodically Protected Steel

Impressed Device: No

Tank ID: D

Tank Status: Removed from Ground

Capacity: 550
Product: Used Oil
Install Date: 05/01/1972
Remove Date: 08/16/1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID:

Tank Status: Currently In Use

Capacity: 30

Product: LUBE OIL
Install Date: 05/01/1976
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: F

Direction Distance

Elevation Site Database(s) EPA ID Number

MARATHON UNIT #2071 (Continued)

U003324030

EDR ID Number

Tank Status: Currently In Use

Capacity: 30
Product: LUBE OIL
Install Date: 05/01/1976
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: G

Tank Status: Currently In Use

Capacity: 10000
Product: Gasoline
Install Date: 09/01/1991
Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging, Inventory Control

Pipe Realease Detection: Automatic Line Leak Detectors Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Cathodically Protected Steel, Epoxy Coated Steel

Impressed Device: Yes

Tank ID:

Tank Status: Currently In Use

Capacity: 10000
Product: Gasoline
Install Date: 09/01/1991
Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging, Inventory Control

Pipe Realease Detection: Automatic Line Leak Detectors Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Cathodically Protected Steel

Impressed Device: Yes

Tank ID:

Tank Status: Currently In Use

Capacity: 12000
Product: Gasoline
Install Date: 09/01/1991
Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging
Pipe Realease Detection: Automatic Line Leak Detectors
Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Cathodically Protected Steel

Impressed Device: Yes

Tank ID:

Tank Status: Temporarily out of Use

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

MARATHON UNIT #2071 (Continued)

U003324030

N/A

Capacity: 550 Product: Used Oil Install Date: 09/01/1991 Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging, Interstitial Monitoring Double Walled Tank

Pipe Realease Detection: Not reported

Piping Material: DIRECT FILL, Galvanized Steel

Piping Type: Gravity Fed?

Construction Material: Cathodically Protected Steel, Double Walled

Impressed Device:

B5 EDR Hist Auto 1015375430

ENE 26450 LAHSER RD < 1/8 SOUTHFIELD, MI 48034

0.009 mi.

Site 2 of 4 in cluster B 46 ft.

EDR Historical Auto Stations: Relative:

Lower Name: MARATHON NORTHWESTERN & LAHSER

2001 Year:

Actual: Address: 26450 LAHSER RD

680 ft.

MARATHON NORTHWESTERN & LAHSER Name:

Year: 2002

Address: 26450 LAHSER RD

Name: MARATHON NORTHWESTERN & LAHSER

Year: 2004

Address: 26450 LAHSER RD

Name: NORTHWEST MARATHON

Year: 2005

26450 LAHSER RD Address:

SOUTHFIELD FUEL STOP Name:

Year: 2006

Address: 26450 LAHSER RD

SOUTHFIELD FUEL STOP Name:

Year: 2007

Address: 26450 LAHSER RD

Name: SOUTHFIELD FUEL STOP

2008 Year:

Address: 26450 LAHSER RD

NORTHWESTERN MARATHON AUTO REPAIR Name:

2009 Year:

Address: 26450 LAHSER RD

Name: NORTHWESTERN MARATHON AUTO RPR

Year: 2010

26450 LAHSER RD Address:

Name: SOUTHFIELD FUEL STOP

Year: 2011

26450 LAHSER RD Address:

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

(Continued) 1015375430

Name: SOUTHFIELD FUEL STOP

2012 Year:

Address: 26450 LAHSER RD

В6 1015375217 **EDR Hist Auto** East 26400 LAHSER RD

N/A

< 1/8 SOUTHFIELD, MI 48033

0.009 mi.

Site 3 of 4 in cluster B 46 ft.

EDR Historical Auto Stations: Relative:

AUTO INDUSTRIAL ACTION GROUP Name: Lower

Year:

Actual: Address: 26400 LAHSER RD 684 ft.

EDR Hist Auto 1015373784 N/A

SE 26200 LAHSER RD

0.010 mi. 54 ft.

< 1/8

EDR Historical Auto Stations: Relative:

SOUTHFIELD, MI 48034

AUTOMOTIVE IND ACTION GROUP Name: Lower

Year: 2004

Actual: Address: 26200 LAHSER RD

680 ft.

AUTOMOTIVE IND ACTION GROUP Name:

Year: 2005

Address: 26200 LAHSER RD

Name: INTERNATIONAL AUTOMOTIVE OVERSITE BU

2008 Year:

26200 LAHSER RD Address:

В8 MI DEPT/TRANSPORTATION RCRA NonGen / NLR 1001196646

ENE M 10 UNDER LASHER RD SOUTHFIELD, MI 48075 < 1/8

0.025 mi.

Site 4 of 4 in cluster B 131 ft. RCRA NonGen / NLR: Relative:

Date form received by agency: 09/17/1998 Lower

Facility name: MI DEPT/TRANSPORTATION

Actual: Facility address: M 10 UNDER LASHER RD 681 ft. SOUTHFIELD, MI 48075

EPA ID: MIR000022954 Mailing address: PO BOX 30050

LANSING, MI 48909

Contact: GARY BEASLEY Contact address: M 10 UNDER LASHER RD

SOUTHFIELD, MI 48075

Contact country:

Contact telephone: (517) 241-0085 Contact email: Not reported

EPA Region: 05 MIR000022954

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

MI DEPT/TRANSPORTATION (Continued)

1001196646

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: MICH DEPT OF TRANSPORTATION

Owner/operator address: Not reported Not reported Owner/operator country: Not reported Owner/operator telephone: Not reported

Legal status: State Owner/Operator Type: Owner Owner/Op start date: 01/01/1970 Owner/Op end date: Not reported

Owner/operator name: MICH DEPT OF TRANSPORTATION

Owner/operator address: Not reported

> Not reported Not reported Not reported

Owner/operator telephone: Legal status: State Owner/Operator Type: Operator 01/01/1970 Owner/Op start date: Owner/Op end date: Not reported

Handler Activities Summary:

Owner/operator country:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Waste code: D001

IGNITABLE WASTE Waste name:

Historical Generators:

Date form received by agency: 04/11/1997

MI DEPT/TRANSPORTATION Site name: Classification: Large Quantity Generator

D001 Waste code:

Waste name: **IGNITABLE WASTE**

Violation Status: No violations found

MAP FINDINGS Map ID

Direction Distance

Elevation Site Database(s) **EPA ID Number**

9 **26500 NORTHWESTERN HIGHWAY** US BROWNFIELDS 1001078051 ΝE **26500 NORTHWESTERN HIGHWAY** RCRA NonGen / NLR MIR000010199

SOUTHFIELD, MI 48075 < 1/8 0.059 mi.

309 ft. Relative:

Higher

US BROWNFIELDS:

Recipient name: Southfield (City of) Brownfield Redevelopment Authority

Grant type: Assessment

Actual: Property name: 26500 NORTHWESTERN HIGHWAY 687 ft.

Property #: Not reported

Parcel size:

Property Description: From at least 1937 until 1949 the Property appeared to be used

> primarily for residential/agricultural purposes. A 1938 assessing record indicated a residential dwelling on the Property which used oil as its heat source. In 1952 an office, garage, and storage

building were constructed on the Property. Between approximately 1952 and 1967 several buildings were constructed which appear to be associated with nursery operations during that time period. In 1969 the entire property was redeveloped and the current Property building was constructed for office use. Between the early 1970s and 2006 the Property has been occupied by multiple commercial tenants for office

use.

Latitude: 42.4653193 Lonaitude: -83.2303749 HCM label: Not reported Map scale: Not reported Point of reference: Not reported Datum: Not reported ACRES property ID: 128961 Start date: Not reported Completed date: Not reported Acres cleaned up: Not reported Cleanup funding: Not reported Cleanup funding source: Not reported Assessment funding: 20501

Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement

Redevelopment funding: Not reported Redev. funding source: Not reported Redev. funding entity name: Not reported Redevelopment start date: Not reported Assessment funding entity: **EPA** Cleanup funding entity: Not reported

Grant type: Н

Accomplishment type: Phase II Environmental Assessment

Accomplishment count:

Cooperative agreement #: 00E65601 Ownership entity: Not reported Current owner: Not reported Did owner change: Not reported

Cleanup required: No Video available: No Photo available: Yes Institutional controls required:

IC Category proprietary controls: Not reported IC cat. info. devices: Not reported IC cat. gov. controls: Not reported IC cat. enforcement permit tools: Not reported IC in place date: Not reported **EDR ID Number**

FINDS

ECHO

Map ID MAP FINDINGS
Direction

Distance
Elevation Site Database(s)

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

EDR ID Number

EPA ID Number

IC in place: Not reported State/tribal program date: Not reported State/tribal program ID: Not reported State/tribal NFA date: Not reported Air contaminated: Not reported Air cleaned: Not reported Asbestos found: Not reported Not reported Asbestos cleaned: Controled substance found: Not reported Controled substance cleaned: Not reported Not reported Drinking water affected: Not reported Drinking water cleaned: Groundwater affected: Not reported Groundwater cleaned: Not reported Lead contaminant found: Not reported Lead cleaned up: Not reported No media affected: Not reported Unknown media affected: Not reported Other cleaned up: Not reported Other metals found: Not reported Not reported Other metals cleaned: Other contaminants found: Not reported Other contams found description: Not reported PAHs found: Not reported PAHs cleaned up: Not reported PCBs found: Not reported PCBs cleaned up: Not reported Petro products found: Not reported Petro products cleaned: Not reported Sediments found: Not reported Not reported Sediments cleaned: Soil affected: Not reported Not reported Soil cleaned up: Surface water cleaned: Not reported VOCs found: Not reported VOCs cleaned: Not reported Cleanup other description: Not reported Num. of cleanup and re-dev. jobs: Not reported Past use greenspace acreage: Not reported Past use residential acreage: Not reported Past use commercial acreage: Past use industrial acreage: Not reported Future use greenspace acreage: Not reported Not reported Future use residential acreage: Future use commercial acreage: Future use industrial acreage: Not reported Greenspace acreage and type: Not reported Superfund Fed. landowner flag: Not reported Arsenic cleaned up: Not reported Not reported Cadmium cleaned up: Chromium cleaned up: Not reported Copper cleaned up: Not reported Iron cleaned up: Not reported mercury cleaned up: Not reported nickel cleaned up: Not reported No clean up: Not reported Pesticides cleaned up: Not reported

Direction Distance Elevation

stance EDR ID Number evation Site Database(s) EPA ID Number

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

Selenium cleaned up: Not reported SVOCs cleaned up: Not reported Not reported Unknown clean up: Not reported Arsenic contaminant found: Cadmium contaminant found: Not reported Chromium contaminant found: Not reported Not reported Copper contaminant found: Not reported Iron contaminant found: Mercury contaminant found: Not reported Nickel contaminant found: Not reported Not reported No contaminant found: Not reported Pesticides contaminant found: Selenium contaminant found: Not reported SVOCs contaminant found: Not reported Unknown contaminant found: Not reported Future Use: Multistory Not reported Not reported Media affected Bluiding Material: Media affected indoor air: Not reported Building material media cleaned up: Not reported Indoor air media cleaned up: Not reported Unknown media cleaned up: Not reported Past Use: Multistory Not reported

Recipient name: Southfield (City of) Brownfield Redevelopment Authority

Grant type: Assessment

Property name: 26500 NORTHWESTERN HIGHWAY

Property #: Not reported

Parcel size: 4

Property Description: From at least 1937 until 1949 the Property appeared to be used

primarily for residential/agricultural purposes. A 1938 assessing record indicated a residential dwelling on the Property which used oil as its heat source. In 1952 an office, garage, and storage

building were constructed on the Property. Between approximately 1952 and 1967 several buildings were constructed which appear to be associated with nursery operations during that time period. In 1969 the entire property was redeveloped and the current Property building was constructed for office use. Between the early 1970s and 2006 the Property has been occupied by multiple commercial tenants for office

use.

Latitude: 42.4653193 Longitude: -83.2303749 HCM label: Not reported Map scale: Not reported Point of reference: Not reported Not reported Datum: ACRES property ID: 128961 Start date: Not reported Completed date: Not reported Acres cleaned up: Not reported Cleanup funding: Not reported Cleanup funding source: Not reported Assessment funding:

Assessment funding source: US EPA - Brownfields Assessment Cooperative Agreement

Redevelopment funding: Not reported Redev. funding source: Not reported Redev. funding entity name: Not reported Redevelopment start date: Not reported

Map ID MAP FINDINGS
Direction

Distance Elevation

Site Database(s) EPA ID Number

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

EDR ID Number

Assessment funding entity: EPA
Cleanup funding entity: Not reported

Grant type: H

Accomplishment type: Phase I Environmental Assessment

Accomplishment count: 1

Cooperative agreement #: 00E65601
Ownership entity: Not reported
Current owner: Not reported
Did owner change: Not reported

Cleanup required: No Video available: No Photo available: Yes Institutional controls required: N

IC Category proprietary controls: Not reported IC cat. info. devices: Not reported IC cat. gov. controls: Not reported IC cat. enforcement permit tools: Not reported IC in place date: Not reported IC in place: Not reported State/tribal program date: Not reported State/tribal program ID: Not reported State/tribal NFA date: Not reported Air contaminated: Not reported Air cleaned: Not reported Asbestos found: Not reported Not reported Asbestos cleaned: Controled substance found: Not reported Controled substance cleaned: Not reported Drinking water affected: Not reported Not reported Drinking water cleaned: Groundwater affected: Not reported Groundwater cleaned: Not reported Lead contaminant found: Not reported Lead cleaned up: Not reported Not reported No media affected: Unknown media affected: Not reported Other cleaned up: Not reported Other metals found: Not reported Other metals cleaned: Not reported Other contaminants found: Not reported Other contams found description: Not reported Not reported PAHs found: PAHs cleaned up: Not reported Not reported PCBs found: PCBs cleaned up: Not reported Petro products found: Not reported Petro products cleaned: Not reported Sediments found: Not reported Sediments cleaned: Not reported Soil affected: Not reported Soil cleaned up: Not reported Surface water cleaned: Not reported VOCs found: Not reported VOCs cleaned: Not reported Cleanup other description: Not reported Num. of cleanup and re-dev. jobs: Not reported

Past use greenspace acreage:

Not reported

Direction Distance Elevation

Site Database(s) **EPA ID Number**

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

EDR ID Number

Past use residential acreage: Not reported

Past use commercial acreage:

Past use industrial acreage: Not reported Not reported Future use greenspace acreage: Future use residential acreage: Not reported

Future use commercial acreage:

Future use industrial acreage: Not reported Greenspace acreage and type: Not reported Superfund Fed. landowner flag: Not reported Arsenic cleaned up: Not reported Cadmium cleaned up: Not reported Not reported Chromium cleaned up: Copper cleaned up: Not reported Iron cleaned up: Not reported mercury cleaned up: Not reported nickel cleaned up: Not reported Not reported No clean up: Pesticides cleaned up: Not reported Selenium cleaned up: Not reported SVOCs cleaned up: Not reported Not reported Unknown clean up: Arsenic contaminant found: Not reported Cadmium contaminant found: Not reported Chromium contaminant found: Not reported Copper contaminant found: Not reported Not reported Iron contaminant found: Mercury contaminant found: Not reported Nickel contaminant found: Not reported No contaminant found: Not reported Not reported Pesticides contaminant found: Selenium contaminant found: Not reported SVOCs contaminant found: Not reported Unknown contaminant found: Not reported Future Use: Multistory Not reported Not reported Media affected Bluiding Material: Not reported Media affected indoor air: Building material media cleaned up: Not reported Indoor air media cleaned up: Not reported Unknown media cleaned up: Not reported Past Use: Multistory Not reported

RCRA NonGen / NLR:

Date form received by agency: 12/31/2001

Facility name: UNIVERSAL STANDARD MEDICAL LABORATORIES INC

Facility address: 26500 NORTHWESTERN HWY

SOUTHFIELD, MI 48076

EPA ID: MIR000010199 Contact: LARRY LIBBRECHT

Contact address: 26500 NORTHWESTERN HWY

SOUTHFIELD, MI 48076

Contact country: US

Contact telephone: (810) 358-0810 Contact email: Not reported

EPA Region: 05

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Direction Distance Elevation

on Site Database(s) EPA ID Number

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

EDR ID Number

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE

Owner/operator address: Not reported

Not reported

Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2002
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE

Owner/operator address:

Owner/operator country:

Owner/operator telephone:
Legal status:

Owner/Operator Type:
Owner/Operator Type:
Owner/Op start date:
Owner/Op end date:

Not reported
Private
Operator
Operator
Operator
Ond/01/2002
Owner/Op end date:

Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Waste code: D001

. Waste name: IGNITABLE WASTE

Historical Generators:

Date form received by agency: 11/29/1995

Site name: UNIVERSAL STANDARD MEDICAL LABORATORIES INC

Classification: Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

Violation Status: No violations found

FINDS:

Registry ID: 110043455775

Environmental Interest/Information System

Direction Distance

EDR ID Number Elevation Site **EPA ID Number** Database(s)

26500 NORTHWESTERN HIGHWAY (Continued)

1001078051

US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Registry ID: 110007586950

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

corrective action activities required under RCRA.

ECHO:

Envid: 1001078051 Registry ID: 110043455775

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110043455775

1001078051 Envid: Registry ID: 110007586950

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110007586950

C10 **ELAN VILLAGE LLC** 1007096749 RCRA NonGen / NLR MIK246344584

SSE **26051 LAHSER RD** < 1/8 SOUTHFIELD, MI 48033

0.059 mi.

Relative:

Site 1 of 3 in cluster C 310 ft. RCRA NonGen / NLR:

Date form received by agency: 04/24/2003 Lower

Facility name: **ELAN VILLAGE LLC** Actual: 26051 LAHSER RD Facility address:

667 ft. SOUTHFIELD, MI 48033

EPA ID: MIK246344584 Mailing address:

31700 MIDDLEBELT RD FARMINGTON HILLS, MI 48334

JOHN HAMBURGER Contact:

26051 LAHSER RD Contact address: SOUTHFIELD, MI 48033

Contact country: US

Contact telephone: (248) 626-6888 Contact email: Not reported

EPA Region: 05

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: **ELAN VILLAGE LLC**

Owner/operator address: Not reported

Not reported

Owner/operator country: Not reported Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Owner Owner/Op start date: 04/16/1997

Direction Distance

Elevation Site Database(s) EPA ID Number

ELAN VILLAGE LLC (Continued)

1007096749

EDR ID Number

Owner/Op end date: Not reported

Owner/operator name: ELAN VILLAGE LLC Owner/operator address: Not reported

ddress: Not reported Not reported

Owner/operator country: Not reported Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Operator Owner/Op start date: 04/16/1997 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: Nο Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Waste code: D001

. Waste name: IGNITABLE WASTE

Violation Status: No violations found

C11 ELAN VILLAGE
SSE 26051 LAHSER RD
< 1/8 SOUTHFIELD, MI 48334

0.059 mi.

310 ft. Site 2 of 3 in cluster C

Relative: LUST:

Lower Facility ID: 00041345

Source: STATE OF MICHIGAN
Actual: Owner Name: Ellan Village LLC

667 ft. Owner Address: 31700 Middlebelt RdSuite 165

Owner City,St,Zip: Farmington, MI 48334
Owner Contact: Not reported
Owner Phone: 248-626-6888

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Elan Village
Latitude: 42.47924
Longitude: -83.26100
Date of Collection: 10/05/2004

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83

MI LUST

MI UST

MI WDS

U003908213

N/A

Direction Distance

Elevation Site Database(s) EPA ID Number

ELAN VILLAGE (Continued)

U003908213

EDR ID Number

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number:C-0148-03Release Date:04/09/2003Substance Released:DieselRelease Status:ClosedRelease Closed Date:11/22/2005

UST:

Facility ID: 00041345 Facility Type: CLOSED

Owner Name: ELLAN VILLAGE LLC

Owner Address: 31700 MIDDLEBELT RDSUITE 165

Owner City, St, Zip: FARMINGTON, MI 48334

Owner Country: USA
Owner Contact: Not reported
Owner Phone: 248-626-6888
Contact: John Hamburger
Contact Phone: (248) 763-3363
Date of Collection: 10/05/2004

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.47924 Longitude: -83.26100

Tank ID:

Tank Status: Removed from Ground

Capacity: 1000 Product: Diesel Not reported Install Date: 04/09/2004 Remove Date: Tank Release Detection: Not reported Pipe Realease Detection: Not reported Piping Material: Unknown Not reported Piping Type: Construction Material: Unknown Impressed Device:

WDS:

Site Id: MIK246344584

WMD Id: 475282

Site Specific Name: ELAN VILLAGE LLC
Mailing Address: 31700 MIDDLEBELT RD

Mailing City/State/Zip: 48334
Mailing County: OAKLAND

Direction Distance

Elevation Site **EPA ID Number** Database(s)

12 **DETROIT EDISON CO** RCRA-CESQG 1001817628 WNW **26801 NORTHWESTERN HWY** FINDS MIR000043570

SOUTHFIELD, MI 48033 **ECHO** < 1/8

0.105 mi. 554 ft.

RCRA-CESQG: Relative:

Higher Date form received by agency: 04/29/2005

DETROIT EDISON CO Facility name: Actual: Facility address: 26801 NORTHWESTERN HWY 686 ft.

SOUTHFIELD, MI 48033

EPA ID: MIR000043570

1 ENERGY PLZ Mailing address: DETROIT, MI 48226

Contact: PATRICK TIERNEY

Contact address: 26801 NORTHWESTERN HWY

SOUTHFIELD, MI 48033

Contact country: US

(313) 235-5573 Contact telephone: Contact email: Not reported

EPA Region:

Conditionally Exempt Small Quantity Generator Classification:

Description: Handler: generates 100 kg or less of hazardous waste per calendar

> month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any

any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely

time: 1 kg or less of acutely hazardous waste; or 100 kg or less of

hazardous waste

Owner/Operator Summary:

Owner/operator country:

DETROIT EDISON COMPANY Owner/operator name:

Owner/operator address: Not reported Not reported Not reported Owner/operator country:

Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Operator Owner/Op start date: 01/01/1991 Owner/Op end date: Not reported

Owner/operator name: DETROIT EDISON COMPANY

Owner/operator address: Not reported

Not reported Not reported

Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Owner Owner/Op start date: 01/01/1991 Owner/Op end date: Not reported **EDR ID Number**

Map ID MAP FINDINGS
Direction

Distance
Elevation Site

Site Database(s) EPA ID Number

DETROIT EDISON CO (Continued)

1001817628

EDR ID Number

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: Nο Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Universal Waste Summary:

Waste type: Batteries
Accumulated waste on-site: Yes
Generated waste on-site: Yes

Waste type: Lamps
Accumulated waste on-site: Yes
Generated waste on-site: Yes

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY

Accumulated waste on-site: No Generated waste on-site: Yes

Waste code: D001

. Waste name: IGNITABLE WASTE

Historical Generators:

Date form received by agency: 04/22/2004

Site name: DETROIT EDISON CO

Classification: Conditionally Exempt Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

Date form received by agency: 01/01/2003

Site name: DETROIT EDISON CO

Classification: Conditionally Exempt Small Quantity Generator

Waste code: D001

Waste name: IGNITABLE WASTE

Date form received by agency: 02/25/2002

Site name: DETROIT EDISON CO

Classification: Conditionally Exempt Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

Date form received by agency: 12/06/1999

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

DETROIT EDISON CO (Continued)

1001817628

Site name: **DETROIT EDISON CO**

Conditionally Exempt Small Quantity Generator Classification:

Waste code:

Waste name: **IGNITABLE WASTE**

Violation Status: No violations found

FINDS:

Registry ID: 110006413069

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

corrective action activities required under RCRA.

ECHO:

1001817628 Envid: Registry ID: 110006413069

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006413069

C13 **MOBIL SERVICE STATION #05QGK** SSE 22020 10 MILE & LAHSER RD

SOUTHFIELD, MI 22037

0.107 mi.

< 1/8

566 ft. Site 3 of 3 in cluster C

LUST: Relative:

00016673 Facility ID: Lower

Source: STATE OF MICHIGAN Owner Name: ExxonMobil -Oil Corporation Actual: 665 ft. Owner Address: 3225 Gallows RdRoom 5B-1734

> Fairfax, VA 22037 Owner City, St, Zip: C S Fennell Owner Contact: (703) 846-5735 Owner Phone:

Country:

District: Region 1 - SE Michigan District Office

Site Name: Mobil #03-qgk 42.45282 Latitude: Longitude: -83.25979 Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100 Accuracy Value Unit: **FEET** Horizontal Data: NAD83 Point Line Area: **POINT**

Desc Category: Plant Entrance (Freight)

Leak Number: C-0026-91 Release Date: 01/08/1991 Substance Released: Not reported Release Status: Closed Release Closed Date: 08/12/1996

MI LUST

MI UST

U003323680

N/A

Direction Distance

Elevation Site Database(s) EPA ID Number

MOBIL SERVICE STATION #05QGK (Continued)

U003323680

EDR ID Number

Leak Number: C-0272-89
Release Date: 06/20/1989
Substance Released: Not reported
Release Status: Closed
Release Closed Date: 08/12/1996

UST:

Facility ID: 00016673 Facility Type: CLOSED

Owner Name: EXXONMOBIL -OIL CORPORATION
Owner Address: 3225 GALLOWS RDROOM 5B-1734

Owner City, St, Zip: FAIRFAX, VA 22037

Owner Country: USA
Owner Contact: C S Fennell
Owner Phone: (703) 846-5735
Contact: ALEX J PRINGLE
Contact Phone: (703) 849-5862
Date of Collection: 01/11/2001

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.45282 Longitude: -83.25979

Tank ID:

Tank Status: Removed from Ground

Capacity: 8000
Product: Gasoline
Install Date: 04/21/1981
Remove Date: 12/27/1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported

Piping Material: Fiberglass reinforced plastic

Piping Type: Not reported

Construction Material: Fiberglass Reinforced plastic

Impressed Device: No

Tank ID: 2

Tank Status: Removed from Ground

Capacity: 10000
Product: Gasoline
Install Date: 04/21/1981
Remove Date: 12/27/1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported

Piping Material: Fiberglass reinforced plastic

Piping Type: Not reported

Construction Material: Fiberglass Reinforced plastic

Impressed Device: No

Tank ID: 3

Tank Status: Removed from Ground

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

MOBIL SERVICE STATION #05QGK (Continued)

U003323680

Capacity: 6000 Product: Gasoline Install Date: 04/21/1981 Remove Date: 12/27/1990 Tank Release Detection: Not reported Pipe Realease Detection: Not reported

Piping Material: Fiberglass reinforced plastic

Piping Type: Not reported

Construction Material: Fiberglass Reinforced plastic

Impressed Device:

D14 **UNIT #22-104** MI LUST U002302685 26760 LAHSER RD NNE MI UST N/A

< 1/8 0.117 mi.

Site 1 of 4 in cluster D 620 ft.

Relative: Higher

Actual:

690 ft.

LUST:

SOUTHFIELD, MI 48034

00019038 Facility ID:

STATE OF MICHIGAN Source: Owner Name: Dawn Donut System Inc Owner Address: PO Box 310289

Owner City, St, Zip: Flint, MI 48531 Owner Contact: Jeff Hurand Owner Phone: (810) 733-0760

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Dawn Donuts System

Latitude: 42.48731 Longitude: -83.26134 Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100

Accuracy Value Unit: **FEET** Horizontal Data: NAD83 Point Line Area: **POINT**

Desc Category: Plant Entrance (Freight)

Leak Number: C-0077-92 01/20/1992 Release Date: Substance Released: Gasoline, Used Oil

Release Status: Closed Release Closed Date: 02/20/1995

UST:

Facility ID: 00019038 Facility Type: CLOSED

DAWN DONUT SYSTEM INC Owner Name:

Owner Address: PO BOX 310289 FLINT, MI 48531 Owner City, St, Zip:

Owner Country: USA Owner Contact: Jeff Hurand (810) 733-0760 Owner Phone: Contact: JEFF HURAND Contact Phone: (810) 733-0760 Date of Collection: 01/11/2001 Accuracy: 100 Accuracy Value Unit: **FEET**

Direction Distance

Elevation Site Database(s) EPA ID Number

UNIT #22-104 (Continued)

Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48731 Longitude: -83.26134

Tank ID:

Tank Status: Removed from Ground

Capacity: 6000
Product: Gasoline
Install Date: 05/07/1974
Remove Date: 02/20/1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: 2

Tank Status: Removed from Ground

Capacity: 6000
Product: Gasoline
Install Date: 05/07/1974
Remove Date: 02/20/1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: 3

Tank Status: Removed from Ground

Capacity: 6000
Product: Gasoline
Install Date: 05/07/1974
Remove Date: 02/20/1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

Capacity: Not reported Product: Used Oil Install Date: Not reported Remove Date: 02/20/1992 Tank Release Detection: Not reported

EDR ID Number

U002302685

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

UNIT #22-104 (Continued) U002302685

Pipe Realease Detection: Not reported Piping Material: Unknown Piping Type: Not reported Construction Material: Unknown Impressed Device: No

D15 **SUNRISE DONUTS** S110142615 MI BEA NNE **26760 LAHSER** MI WDS N/A

SOUTHFIELD, MI 48033 < 1/8

0.117 mi.

Site 2 of 4 in cluster D 620 ft.

Relative:

Secondary Address: Not reported Higher BEA Number: 4305 Actual: District: Southeast MI 690 ft.

Date Received: 12/04/2009 Submitter Name: NDS Real Estate LLC

Petition Determination: No Request

Petition Disclosure: 0

Category: No Hazardous Substance(s)

Determination 20107A: No Request Reviewer: mathewsb Division Assigned: RRD

WDS:

Site Id: MID985613702 WMD Id: 405256

Site Specific Name: **DAWN DONUTS 22104** Mailing Address: 4300 W PIERSON RD

Mailing City/State/Zip: 48504 Mailing County: **GENESEE**

D16 **DAWN DONUTS** RCRA NonGen / NLR 1000528938

NNE **FINDS** MID985613702 26760 LAHSER RD < 1/8 SOUTHFIELD, MI 48033 **ECHO**

0.117 mi.

620 ft. Site 3 of 4 in cluster D Relative:

Higher

RCRA NonGen / NLR:

Date form received by agency: 09/08/1997 Facility name: **DAWN DONUTS** Actual: 26760 LAHSER RD Facility address:

690 ft. SOUTHFIELD, MI 48033

EPA ID: MID985613702 Mailing address: 4300 W PIERSON RD FLINT, MI 48504

JEFF HURAND Contact: Contact address: 26760 LAHSER RD SOUTHFIELD, MI 48033

Contact country: US

(313) 733-0760 Contact telephone: Contact email: Not reported

EPA Region: 05

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste Map ID MAP FINDINGS
Direction

Distance Elevation

nce EDR ID Number tition Site Database(s) EPA ID Number

DAWN DONUTS (Continued) 1000528938

Owner/Operator Summary:

Owner/operator name: HURAND GARY
Owner/operator address: Not reported
Not reported

Owner/operator country:

Owner/operator telephone:

Legal status:

Owner/Operator Type:

Owner/Op start date:

Owner/Op end date:

Not reported

Not reported

Owner

Owner

Owner

Not reported

Owner/operator name: **HURAND GARY** Owner/operator address: Not reported Not reported Owner/operator country: Not reported Owner/operator telephone: Not reported Legal status: Private Owner/Operator Type: Operator Owner/Op start date: 01/01/1970 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

Waste code: D001

. Waste name: IGNITABLE WASTE

Historical Generators:

Date form received by agency: 05/20/1991
Site name: DAWN DONUTS
Classification: Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

Violation Status: No violations found

FINDS:

Registry ID: 110003657980

Environmental Interest/Information System

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

DAWN DONUTS (Continued)

1000528938

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:

Envid: 1000528938 Registry ID: 110003657980

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110003657980

MI INVENTORY S114038939 NNE **26760 LAHSER** N/A

D17 **SUNRISE DONUTS**

< 1/8 OAKLAND (County), MI 48033

0.117 mi.

620 ft. Site 4 of 4 in cluster D

INVENTORY: Relative:

200904305LV Bea Number: Higher

Township: Southfield Actual: District: Southeast MI

690 ft. Data Source: BEA

> Not reported Latitude: Longitude: Not reported

E18 **EATON CORPORATION** MI AST A100204998 **26201 NORTHWESTERN HWY** N/A

ESE 1/8-1/4 SOUTHFIELD, MI 48076

0.224 mi.

1183 ft. Site 1 of 2 in cluster E

AST: Relative:

Facility ID: 91063246 Lower Facility Phone: (248) 226-6347

Actual: Owner Name: **EATON CORPORATION** 670 ft. 26201 NORTHWESTERN HWY Owner Address:

Owner City, St, Zip: SOUTHFIELD, OH 44122

Owner County: USA

Owner Contact: Account Payable Owner Telephone: (800) 386-1911

Region 1 - SE Michigan District Office District:

Contact: Bill Burlingame **ACTIVE** List Status: Date of Collection: 01/11/2001 Accuracy: 100 FEET

STATE OF MICHIGAN Source:

Point Line Area: **POINT**

Plant Entrance (Freight) **Description Category:**

Address Matching-House Number Method of Collection:

NAD83 Horizontal Datum: Latitude: 42.4809250 Longitude: -83.256136

Tank Id: 1

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON CORPORATION (Continued)

A100204998

MI UST

FINDS NY MANIFEST

ECHO

US AIRS

EDR ID Number

Tank Status: Currently In Use

Capacity (in gallons): 8000 Installation Date: 02/14/1992

Substance Stored: FL

Removed/Closed Date: Not reported

E19 EATON RESEARCH CENTER RCRA-SQG 1000336074
ESE 26201 NORTHWESTERN HWY MI LUST MID098684871

1/8-1/4 SOUTHFIELD, MI 48076 0.224 mi.

1183 ft. Site 2 of 2 in cluster E

Relative: Lower

RCRA-SQG:

Actual: Date form received by agency: 06/12/2012 670 ft. Facility name: FATON CO

f. Facility name: EATON CORPORATION
Facility address: 26201 NORTHWESTERN HWY

SOUTHFIELD, MI 48076

EPA ID: MID098684871

Contact: WILLIAM BURLINGAME

Contact address: Not reported Not reported

Contact country: US

Contact telephone: (248) 226-6347

Contact email: BILLBURLINGAME@EATON.COM

EPA Region: 05 Land type: Private

Classification: Small Small Quantity Generator

Description: Handler: generates more than 100 and less than 1000 kg of hazardous

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: EATON CORP
Owner/operator address: Not reported

Not reported

Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/28/1980
Owner/Op end date: Not reported

Owner/operator name: EATON CORP
Owner/operator address: Not reported
Not reported

Owner/operator country:

Owner/operator telephone:

Legal status:

Owner/Operator Type:

Owner/Op start date:

Owner/Op end date:

Not reported

Not reported

Not reported

Not reported

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No Used oil transfer facility: No Used oil transporter: No

. Waste code: D001

. Waste name: IGNITABLE WASTE

Historical Generators:

Date form received by agency: 04/05/2010

Site name: EATON CORPORATION Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Date form received by agency: 02/27/2004

Site name: EATON CORPORATION
Classification: Small Quantity Generator

Waste code: D001

Waste name: IGNITABLE WASTE

Date form received by agency: 10/28/1980

Site name: EATON CORPORATION
Classification: Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

Facility Has Received Notices of Violations:

Regulation violated:

Not reported

Area of violation: Generators - Records/Reporting

Date violation determined: 08/04/2009
Date achieved compliance: 10/20/2009
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 09/17/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

EATON RESEARCH CENTER (Continued)

1000336074

Regulation violated: Not reported

State Statute or Regulation Area of violation:

Date violation determined: 08/04/2009 Date achieved compliance: 12/29/2009 Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Not reported Final penalty amount: Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: State Statute or Regulation

08/04/2009 Date violation determined: Date achieved compliance: 12/29/2009 Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

Enforcement action date: 09/17/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Not reported Final penalty amount: Paid penalty amount: Not reported

Regulation violated: Not reported LDR - General Area of violation: 08/04/2009 Date violation determined: Date achieved compliance: 12/09/2009 Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Not reported Paid penalty amount:

Regulation violated: Not reported

Generators - Pre-transport Area of violation:

Date violation determined: 08/04/2009 Date achieved compliance: 09/16/2009 Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported

Direction Distance

Elevation Site Database(s) **EPA ID Number**

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Area of violation: Generators - Records/Reporting

Date violation determined: 08/04/2009 10/20/2009 Date achieved compliance: Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Not reported Paid penalty amount:

Regulation violated: Not reported

Area of violation: Universal Waste - Small Quantity Handlers

Date violation determined: 08/04/2009 11/09/2009 Date achieved compliance: Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Universal Waste - Small Quantity Handlers

Date violation determined: 08/04/2009 11/09/2009 Date achieved compliance: Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 09/17/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Used Oil - Generators

Date violation determined: 08/04/2009 Date achieved compliance: 09/16/2009

Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

Enforcement action date: 08/10/2009 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Generators - Manifest

Direction Distance Elevation

tion Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Date violation determined: 08/04/2009
Date achieved compliance: 12/09/2009
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 08/10/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Paid penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Generators - Manifest

Date violation determined: 08/04/2009
Date achieved compliance: 12/09/2009
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 09/17/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 08/04/2009
Date achieved compliance: 12/09/2009
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 09/17/2009
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Generators - General

Date violation determined: 06/08/1995
Date achieved compliance: 10/16/1995
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 09/28/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: Not reported

Area of violation: Generators - General

Date violation determined: 06/08/1995

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Date achieved compliance: 10/16/1995 Violation lead agency: State

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

Enforcement action date: 06/08/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

Evaluation Action Summary:

Paid penalty amount:

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Universal Waste - Small Quantity Handlers

Not reported

Date achieved compliance: 11/09/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Pre-transport

Date achieved compliance: 09/16/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: State Statute or Regulation

Date achieved compliance: 12/29/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Manifest

Date achieved compliance: 12/09/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Used Oil - Generators

Date achieved compliance: 09/16/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Records/Reporting

Date achieved compliance: 10/20/2009 Evaluation lead agency: State

Evaluation date: 08/04/2009

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: LDR - General Date achieved compliance: 12/09/2009 Evaluation lead agency: State

Evaluation date: 10/16/1995

Evaluation: FOLLOW-UP INSPECTION

Area of violation: Not reported

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Date achieved compliance: Not reported Evaluation lead agency: State

Evaluation date: 06/06/1995

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - General

Date achieved compliance: 10/16/1995 Evaluation lead agency: State

LUST:

Facility ID: 00016074

Source: STATE OF MICHIGAN

Owner Name: Eaton Corporation/World Headquraters

Owner Address: 1000 Eaton Blvd
Owner City,St,Zip: Cleveland, OH 44122
Owner Contact: Account Payable
Owner Phone: (800) 386-1911

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Eaton Corp- Southfield

Latitude: 42.48092 Longitude: -83.25613 Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number:C-0702-89Release Date:10/27/1989Substance Released:Not reportedRelease Status:ClosedRelease Closed Date:06/04/2007

Leak Number: C-0871-92
Release Date: 08/10/1992
Substance Released: Diesel,Gasoline
Release Status: Closed
Release Closed Date: 06/04/2007

UST:

Facility ID: 00016074 Facility Type: CLOSED

Owner Name: EATON CORPORATION/WORLD HEADQURATERS
Owner Address: 1111 SUPERIOR AVE EAST EATON CENTER

Owner City, St, Zip: CLEVELAND, OH 44114-2535

Owner Country: USA

Owner Contact:
Owner Phone:
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Accuracy Value Unit: FEET Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48092 Longitude: -83.25613

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 2000

 Product:
 Diesel

 Install Date:
 04/28/1960

 Remove Date:
 05/27/1992

Tank Release Detection: Inventory Control, Tank Tightness Testing

Pipe Realease Detection: Not reported

Piping Material: Secondary Containment

Piping Type: Gravity Fed?

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

Capacity: 2000
Product: Diesel
Install Date: 04/28/1960
Remove Date: 12/11/1989
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: 3

Tank Status: Removed from Ground

 Capacity:
 2000

 Product:
 Gasoline

 Install Date:
 04/28/1970

 Remove Date:
 05/27/1992

Tank Release Detection: Inventory Control, Tank Tightness Testing

Pipe Realease Detection: Not reported

Piping Material: Secondary Containment

Piping Type: Gravity Fed?

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 250

 Product:
 Used Oil

 Install Date:
 04/28/1970

 Remove Date:
 07/03/1991

Tank Release Detection: Inventory Control, Tank Tightness Testing

Pipe Realease Detection: Not reported Piping Material: Bare Steel

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

US AIRS (AFS):

Envid: 1000336074 Region Code: 05 County Code: MI125

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587 D and B Number: Not reported

Facility Site Name: EATON RESEARCH CENTER

Primary SIC Code: 8734
NAICS Code: 541330
Default Air Classification Code: SMI
Facility Type of Ownership Code: POF
Air CMS Category Code: SMI

HPV Status: Not reported

US AIRS (AFS):

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2009-09-01 00:00:00
Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2009-09-02 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587 Air Operating Status Code: OPR

Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2011-01-06 00:00:00
Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

EDR ID Number

1000336074

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Programmatic ID: AIR MI0000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2011-01-10 00:00:00
Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2014-07-03 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: Federally-Enforceable State Operating Permit - Non Title V

Activity Date: 2014-08-20 00:00:00
Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR
Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2007-04-20 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2008-03-19 00:00:00
Activity Status Date: Not reported

Activity Group: Compliance Monitoring Activity Type: Inspection/Evaluation

Direction Distance

Elevation Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2009-09-01 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI0000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR
Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2009-09-02 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2011-01-06 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2011-01-10 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2014-07-03 00:00:00

Direction Distance Elevation

n Site Database(s) EPA ID Number

EATON RESEARCH CENTER (Continued)

1000336074

EDR ID Number

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 05

Programmatic ID: AIR MI00000000000B2217

Facility Registry ID: 110003609587

Air Operating Status Code: OPR Default Air Classification Code: SMI

Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards

Activity Date: 2014-08-20 00:00:00

Activity Status Date: Not reported

Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

Activity Status: Not reported

FINDS:

Registry ID: 110003609587

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR SYNTHETIC MINOR

HAZARDOUS AIR POLLUTANT MAJOR

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:

EPA ID: MID098684871

Country: USA

Location Address 1: 26201 NORTHWESTERNHWY

Location Address 2: Not reported Location City: SOUTHFIELD

Location State: MI
Location Zip Code: 48037
Location Zip Code 4: Not reported

MAP FINDINGS Map ID

Direction Distance Elevation

EDR ID Number Site Database(s) **EPA ID Number**

EATON RESEARCH CENTER (Continued)

1000336074

Mailing Info:

Name: **EATON**

WILEY S REECE Contact:

Address: 26201 NORTHWESTERN HWY City/State/Zip: SOUTHFIELD, MI 48037

Country: USA

Phone: 313-354-6877

Manifest:

Document ID: NYB4013685

Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

Trans1 State ID: 41608Y Trans2 State ID: 84373DNY Generator Ship Date: 05/12/1993 Trans1 Recy Date: 05/12/1993 Trans2 Recv Date: 05/17/1993 TSD Site Recv Date: 05/17/1993 Part A Recv Date: 05/21/1993 Part B Recv Date: 06/07/1993 Generator EPA ID: MID098684871 Trans1 EPA ID: MID087478574 Trans2 EPA ID: NYD057770109 TSDF ID: NYD057770109

Waste Code: D009 - MERCURY 0.2 MG/L TCLP

Quantity: 00040 Units: P - Pounds Number of Containers: 002

Container Type: DM - Metal drums, barrels

Handling Method: R Material recovery of more than 75 percent of the total material.

Specific Gravity: 100 Year: 1993

Document ID: NYB4848759 Completed copy Manifest Status:

Trans1 State ID: 63360L Trans2 State ID: 99450VNY Generator Ship Date: 02/08/1993 Trans1 Recv Date: 02/08/1993 Trans2 Recv Date: 02/12/1993 TSD Site Recv Date: 02/16/1993 Part A Recv Date: 02/23/1993 Part B Recv Date: 03/01/1993 Generator EPA ID: MID098684871 Trans1 EPA ID: MID087478574 Trans2 EPA ID: NYD057770109 TSDF ID: NYD057770109

Waste Code: D001 - NON-LISTED IGNITABLE WASTES

00200 Quantity: Units: P - Pounds Number of Containers: 001

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: B Incineration, heat recovery, burning.

Specific Gravity:

Waste Code: D002 - NON-LISTED CORROSIVE WASTES

Direction Distance

EDR ID Number Elevation Site **EPA ID Number** Database(s)

EATON RESEARCH CENTER (Continued)

1000336074

Quantity: 00225 P - Pounds Units: Number of Containers: 002

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: T Chemical, physical, or biological treatment.

Specific Gravity:

Waste Code: D001 - NON-LISTED IGNITABLE WASTES

Quantity: 00015 P - Pounds Units: Number of Containers: 001

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: B Incineration, heat recovery, burning.

Specific Gravity:

Waste Code: D002 - NON-LISTED CORROSIVE WASTES

Quantity: 00015 P - Pounds Units:

001 Number of Containers:

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: T Chemical, physical, or biological treatment.

Specific Gravity: 100 1993 Year:

Document ID: NYB4013694

Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

Trans1 State ID: 41608Y Trans2 State ID: 84373DNY Generator Ship Date: 05/12/1993 Trans1 Recv Date: 05/12/1993 Trans2 Recv Date: 05/17/1993 TSD Site Recv Date: 05/17/1993 Part A Recy Date:

Part B Recv Date: 06/07/1993 Generator EPA ID: MID098684871 Trans1 EPA ID: MID087478574 Trans2 EPA ID: NYD057770109 TSDF ID: NYD057770109

Waste Code: U159 - METHYL ETHYL KETONE(L,T)

Quantity: 00200 Units: P - Pounds Number of Containers: 001

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: B Incineration, heat recovery, burning.

Specific Gravity: 100

Waste Code: D002 - NON-LISTED CORROSIVE WASTES

Quantity: 00090 Units: P - Pounds Number of Containers: 001

Container Type: DF - Fiberboard or plastic drums (glass) Handling Method: T Chemical, physical, or biological treatment.

Specific Gravity:

Waste Code: D001 - NON-LISTED IGNITABLE WASTES

00090 Quantity: P - Pounds Units: Number of Containers: 001

DF - Fiberboard or plastic drums (glass) Container Type: Handling Method: B Incineration, heat recovery, burning.

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

EATON RESEARCH CENTER (Continued)

1000336074

Specific Gravity: 100

D002 - NON-LISTED CORROSIVE WASTES Waste Code:

Quantity: 00200 Units: P - Pounds Number of Containers: 001

DF - Fiberboard or plastic drums (glass) Container Type: Handling Method: T Chemical, physical, or biological treatment.

Specific Gravity: 100 1993 Year:

ECHO:

Envid: 1000336074 110003609587 Registry ID:

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110003609587

20 **USPS - MAIN POST OFFICE** MI LUST U003867138 North 22200 W 11 MILE RD MI UST N/A SOUTHFIELD, MI 48037

1/8-1/4 0.243 mi. 1283 ft.

LUST: Relative:

Higher Facility ID: 00012726 STATE OF MICHIGAN Source:

Actual: Owner Name: United States Postal Service 696 ft. Owner Address: 222 S Riverside PlazaSuite #1200 Owner City, St, Zip: Chicago, IL 60606-5902

> Owner Contact: Not reported

Owner Phone: (312) 669-5960

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Southfield Post Office

42.48712 Latitude: -83.26366 Longitude: Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100 Accuracy Value Unit: FEET Horizontal Data: NAD83 Point Line Area: **POINT**

Desc Category: Plant Entrance (Freight)

Leak Number: C-0391-93 04/08/1993 Release Date: Substance Released: Gasoline, Unknown

Release Status: Closed Release Closed Date: 06/11/1996

UST:

Facility ID: 00012726 Facility Type: **CLOSED**

Owner Name: UNITED STATES POSTAL SERVICE Owner Address: 222 S RIVERSIDE PLAZASUITE #1200

Owner City, St, Zip: CHICAGO, IL 60606-5902

Owner Country: USA Not reported Owner Contact: Owner Phone: (312) 669-5960

DANIEL J BORNINSKI Contact:

Direction Distance

Elevation Site Database(s) EPA ID Number

USPS - MAIN POST OFFICE (Continued)

U003867138

N/A

EDR ID Number

Contact Phone: (248) 546-8609
Date of Collection: 01/11/2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48712 Longitude: -83.26366

Tank ID:

Tank Status: Removed from Ground

Capacity: 6000
Product: Gasoline
Install Date: 04/24/1974
Remove Date: 04/21/1996
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown

Piping Type: Suction: Valve at Tank
Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

CVS STORE #08034 MI BEA S109171423

NNE 26980 LAHSER ROAD 1/4-1/2 SOUTHFIELD, MI 48076

0.252 mi.

F21

1328 ft. Site 1 of 9 in cluster F

Relative: BEA

Higher Secondary Address: Not reported BEA Number: 3939

Actual: District: Southeast MI 694 ft. Date Received: 07/08/2008

Submitter Name: CVS 8034 MI, L.L.C.

Petition Determination: Affirmed

Petition Disclosure:

Category: Different Hazardous Substance(s)

Determination 20107A: No Request Reviewer: tiernang Division Assigned: RRD

F22 CVS STORE #08034 MI INVENTORY S114033790
NNE 26980 LAHSER ROAD N/A

1/4-1/2 OAKLAND (County), MI 48076

0.252 mi.

1328 ft. Site 2 of 9 in cluster F

Relative: INVENTORY:

Higher Bea Number: 200803939LV
Township: Southfield
Actual: District: Southeast MI
694 ft. Data Source: BEA

Latitude: Not reported

Direction Distance

Distance Elevation Site EDR ID Number

EDR ID Number

EPA ID Number

CVS STORE #08034 (Continued)

S114033790

Longitude: Not reported

F23 WOODWARD DETROIT CVS PROPERTY MI BEA S111455334
NNE 21911 WEST ELEVEN MILE ROAD MI WDS N/A

1/4-1/2 SOUTHFIELD, MI 48034

0.267 mi.

1409 ft. Site 3 of 9 in cluster F

Relative: BEA:

HigherSecondary Address:Not reportedBEA Number:5006Actual:District:Southeast MI694 ft.Date Received:12/02/2011

Submitter Name: SCP 2011-C38-516 LLC

Petition Determination: No Request

Petition Disclosure: 0

Category: Not reported Determination 20107A: No Request Reviewer: mitchelf

Division Assigned: Storage Tank Division

Secondary Address: Not reported BEA Number: 5007
District: Southeast MI Date Received: 12/02/2011

Submitter Name: Woodward Detroit CVS, L.L.C.

Petition Determination: No Request

Petition Disclosure: 0

Category: Not reported
Determination 20107A: No Request
Reviewer: mitchelf

Division Assigned: Storage Tank Division

WDS:

Site Id: MIK110306995 WMD Id: 491098

Site Specific Name: CVS PHARMACY #8034

Mailing Address: ONE CVS DRIVE

Mailing City/State/Zip: 2895
Mailing County: Not reported

F24 WOODWARD DETROIT CVS PROPERTY

NNE 21911 WEST ELEVEN MILE ROAD 1/4-1/2 OAKLAND (County), MI 48034

0.267 mi. 1409 ft.

9 ft. Site 4 of 9 in cluster F

Relative: INVENTORY:

Higher Bea Number: 201105006LV
Township: Southfield

Township: Southfield

Actual: District: Southeast MI
694 ft. Data Source: BEA

Latitude: BEA
Longitude: Not reported
Not reported

S114039928

N/A

MI INVENTORY

Direction Distance

EDR ID Number Elevation Site **EPA ID Number** Database(s)

F25 **WOODWARD DETROIT CVS PROPERTY** MI INVENTORY S114039927 NNE N/A

21911 WEST ELEVEN MILE RD. OAKLAND (County), MI 48034

1/4-1/2 0.267 mi.

1409 ft. Site 5 of 9 in cluster F

Relative:

INVENTORY:

Data Source:

Higher

Bea Number: 201105007LV

Township: Actual: District:

Southfield Southeast MI

694 ft.

BEA

Latitude: Not reported Longitude: Not reported

F26 **RED O INC/MOBIL 03-K78** MI AUL S113896418 27015 LAHSER ROAD NNE MI SPILLS N/A SOUTHFIELD, MI 48034

1/4-1/2

0.268 mi. 1414 ft. Site 6 of 9 in cluster F

Relative: Higher

Actual:

695 ft.

AUL:

Status: Recorded Site Name: Not reported Property: on-site Land Use Restriction Type: RC

Part 213 Program Type: Program Support Assigned User: Nicholas Ekel Program Support Assigned Date: 08/05/2015 Legal Description Of Property: Not reported Based On The Deq Ref #: 11121314104 MDEQ Reference Number: RC-RRD-213-14-104

Property Or Description Restricted Area: Not reported

Lead Division: RD

File Name Of Hyperlinked Legal Doc: U:\\KERMIT\\11121314104.PDF

Mapped Polygons Area In Acres: 0.6173999999999995 Mapped Polygons Area In Square Miles: 8.99999999999998E-4

Date Data Entry Started: 08/07/2015 Date Data Entry Finished: 08/07/2015

Individual Or Staff Assoc With The Mapping: Nicholas Ekel Program Used To Map Restricted Features: ArcGIS 10.2 Date Legal Paperwork Stamped/Filed/Register Of Deeds: 08/06/2014

Commercial I Land Use Restriction: Commercial li Land Use Restriction: 0 Commercial lii Land Use Restriction: 0 Commercial Iv Land Use Restriction: 0 Industrial Land Use Restriction: 0 Residential Land Use Restriction: 1 Recreational Land Use Restriction: 0 Multiple Land-Use Restrictions: 0 Site Specific Restrictions: n Groundwater Consumption Restrictions: 1 **Groundwater Contact Restrictions:** Special Well Construction Requirements: 0 Special Building Restrictions: **Excavation And Soil Movement Restrictions:**

0 Soil Movement Requirements: 0 There Is A Restriction On All Construction: 0 0 Monitoring Well Protected, No Tampering Or Removal: 0 There Is An Exposure Barrier In Place:

There Is A Health And Safety Plan:

0

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

RED O INC/MOBIL 03-K78 (Continued)

S113896418

U003323682

N/A

There Is A Permanent Marker On The Site:

20150803 - LRUR is NOT mapped in KERMIT - Nick Ekel20150807 - LRUR is Map Comments:

mapped in KERMIT - Nick Ekel

May 9, 2014 consultant requested DEQ reference # to replace Comment:

RC-RRD-213-12-077 which will be rescinded.

PEAS:

Incident Date: 12/21/2009 Office Status: Not reported Initials of Incoming Operator: 12/ Time Received by DNRE Staff: Not reported Time Occur: Not reported Date Of PEAS Call: Not reported Complainant / Company: Not reported Complainant Address: 27015 LAHSER

Company Involved: MOBILE SERVICE STATION

DEQ Division Involved: Not reported

Incident Description: BOUGHT GAS FROM SERVICE STATION ON FRIDAY AROUND 3PM, CAR WAS

RUNNINGEVERYTHING THAT WAS IN THE TRUCK. STATES ITS GREEN IN COLOR.

Description: Not reported

RED O INC MI LUST

NNE **27015 LAHSER RD** 1/4-1/2 SOUTHFIELD, MI 48034 0.268 mi.

MI AUL MI INVENTORY MI WDS

MI UST

1414 ft. Site 7 of 9 in cluster F

Relative: Higher

F27

LUST:

Facility ID: 00016676

Source: STATE OF MICHIGAN

Actual: 695 ft.

Owner Name: Red O Inc Owner Address: 27015 Lahser Rd Southfield, MI 48034 Owner City, St, Zip: Owner Contact: Not reported Owner Phone: (248) 353-0858

Country: USA

Region 1 - SE Michigan District Office District:

Mobil SS #03-K78 Site Name: Latitude: 42.48764

Longitude: -83.26172 Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100 Accuracy Value Unit: **FEET** Horizontal Data: NAD83 Point Line Area: **POINT**

Desc Category: Plant Entrance (Freight)

Leak Number: C-0261-04 Release Date: 06/23/2004 Substance Released: Gasoline Release Status: Closed Release Closed Date: 10/29/2015

UST:

Facility ID: 00016676 Facility Type: **ACTIVE** Owner Name: RED O INC

Direction Distance

Elevation Site Database(s) EPA ID Number

RED O INC (Continued) U003323682

Owner Address: 27015 LAHSER RD Owner City,St,Zip: SOUTHFIELD, MI 48034

Owner Country: USA
Owner Contact: Not reported
Owner Phone: (248) 353-0858
Contact: John Arabi
Contact Phone: (734) 307-4200
Date of Collection: 01/11/2001

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48764 Longitude: -83.26172

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 6000

 Product:
 Gasoline

 Install Date:
 06/01/1980

 Remove Date:
 09/15/2004

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing

Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced plastic

Impressed Device: No

Tank ID: 2

Tank Status: Removed from Ground

 Capacity:
 10000

 Product:
 Gasoline

 Install Date:
 06/01/1980

 Remove Date:
 09/15/2004

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing

Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced plastic

Impressed Device: No

Tank ID: 3

Tank Status: Removed from Ground

 Capacity:
 8000

 Product:
 Gasoline

 Install Date:
 07/01/1982

 Remove Date:
 08/02/1991

Tank Release Detection: Manual Tank Gauging, Tank Tightness Testing

Pipe Realease Detection: Not reported

Piping Material: Fiberglass reinforced plastic

Piping Type: Not reported

Construction Material: Fiberglass Reinforced plastic

EDR ID Number

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

RED O INC (Continued) U003323682

Impressed Device: No

Tank ID:

Tank Status: **Currently In Use**

Capacity: 1000 Used Oil Product: Install Date: 07/01/1982 Remove Date: Not reported

Tank Release Detection: Tank Tightness Testing, Automatic Tank Gauging Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing

Piping Material: Fiberglass Reinforced Plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced Plastic

Impressed Device:

Tank ID:

Removed from Ground Tank Status:

Capacity: 12000 Product: Gasoline Install Date: 06/01/1985 09/15/2004 Remove Date:

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing

Piping Material: Fiberglass reinforced plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced plastic

Impressed Device: No

Tank ID:

Tank Status: Currently In Use

Capacity: 20000 Product: Gasoline 09/20/2004 Install Date: Remove Date: Not reported

Tank Release Detection: Tank Tightness Testing, Automatic Tank Gauging, Interstitial

Monitoring Double Walled Tank

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled

Piping

Double Walled Piping Material: Piping Type: Pressure Construction Material: **Double Walled**

Impressed Device: No

Tank ID:

Tank Status: **Currently In Use**

12000 Capacity: Product:

Gasoline, Diesel Install Date: 09/20/2004 Remove Date: Not reported

Tank Release Detection: Tank Tightness Testing, Automatic Tank Gauging, Interstitial

Monitoring Double Walled Tank

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled

Piping

Direction Distance

Elevation Site Database(s) EPA ID Number

RED O INC (Continued) U003323682

Piping Material: Double Walled
Piping Type: Pressure
Construction Material: Double Walled

Impressed Device: No

AUL:

Status: Pending Site Name: Not reported Property: on-site Land Use Restriction Type: RC Part 213 Program Type: Not reported Program Support Assigned User: Program Support Assigned Date: Not reported Legal Description Of Property: Not reported Based On The Deg Ref #: 11421312077 MDEQ Reference Number: RC-RD-213-12-077

Property Or Description Restricted Area: Not reported

Lead Division: RD

File Name Of Hyperlinked Legal Doc:
Mapped Polygons Area In Acres:
Mapped Polygons Area In Square Miles:
Date Data Entry Started:
Not reported
Not reported
Not reported
Not reported
Not reported

Individual Or Staff Assoc With The Mapping:

Program Used To Map Restricted Features:

Not reported

Date Legal Paperwork Stamped/Filed/Register Of Deeds:

Not reported

Not reported

Commercial I Land Use Restriction: 0 Commercial li Land Use Restriction: 0 Commercial Iii Land Use Restriction: 0 0 Commercial Iv Land Use Restriction: Industrial Land Use Restriction: 0 Residential Land Use Restriction: 0 Recreational Land Use Restriction: 0 Multiple Land-Use Restrictions: 0 Site Specific Restrictions: 0 Groundwater Consumption Restrictions: 0 **Groundwater Contact Restrictions:** Special Well Construction Requirements: 0 Special Building Restrictions: Excavation And Soil Movement Restrictions: Soil Movement Requirements:

Excavation And Soil Movement Restrictions: 0
Soil Movement Requirements: 0
There Is A Restriction On All Construction: 0
Monitoring Well Protected, No Tampering Or Removal: 0
There Is An Exposure Barrier In Place: 0
There Is A Health And Safety Plan: 0
There Is A Permanent Marker On The Site: 0

Map Comments: Not reported

Comment: June 21, 2012 consultant requested DEQ reference #.

INVENTORY:

Bea Number: Not reported
Township: Not reported
District: Southeast MI
Data Source: Part 213
Latitude: 42.48764
Longitude: -83.26173

EDR ID Number

Direction Distance

Distance Elevation Site EDR ID Number

EDR ID Number

EPA ID Number

RED O INC (Continued) U003323682

WDS:

Site Id: MID985615368 WMD Id: 405422

Site Specific Name: EXXONMOBIL OIL CORP 12817
Mailing Address: 16825 NORTHCHASE DR

Mailing City/State/Zip: 77060

Mailing County: Not reported

F28 ELEVEN MILE ROAD COMMERCIAL PROPERTY MI BEA \$110996789
NNE 21851, 21887, & 21911 W. ELEVEN MILE RD. N/A

NNE 21851, 21887, & 21911 W. ELEVEN MILE RD. 1/4-1/2 SOUTHFIELD, MI 48076

0.274 mi.

1447 ft. Site 8 of 9 in cluster F

Relative: BEA:

Higher Secondary Address: Not reported BEA Number: 4753

Actual: District: Southeast MI

694 ft. Date Received: 04/04/2011

Submitter Name: Cauzza - Partners in Ownership - See BEA

Petition Determination: No Request Petition Disclosure: 0
Category: Not reported Determination 20107A: No Request Reviewer: mitchelf

Division Assigned: Storage Tank Division

F29 SHELL (LASHER CONVENIENCE INC) MI LUST U003321821

NNE 27050 LAHSER RD MI UST N/A 1/4-1/2 SOUTHFIELD, MI 48034 MI INVENTORY

1/4-1/2 SOUTHFIELD, MI 48034 MI I 0.283 mi.

 0.283 mi.
 MI BEA

 1496 ft.
 Site 9 of 9 in cluster F
 MI WDS

Relative: LUST: Higher Facility ID: 00010382

Source: STATE OF MICHIGAN

Actual: Owner Name: New 11 Mile & Lahser Shell Inc

695 ft. Owner Address: 27050 Lahser

Owner Address: 27050 Lahser
Owner City,St,Zip: Southfield, MI 48034
Owner Contact: Not reported
Owner Phone: (248) 202-6802

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Shell Service Station

 Latitude:
 42.48794

 Longitude:
 -83.26136

 Date of Collection:
 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number: C-0295-89
Release Date: 06/28/1989

Direction Distance

Elevation Site Database(s) EPA ID Number

SHELL (LASHER CONVENIENCE INC) (Continued)

U003321821

EDR ID Number

Substance Released: Not reported Release Status: Open Release Closed Date: Not reported

Leak Number: C-0507-96
Release Date: 07/25/1996
Substance Released: Gasoline,Unknown

Release Status: Open
Release Closed Date: Not reported

Leak Number: C-0775-94
Release Date: 07/26/1994
Substance Released: Gasoline,Unknown

Release Status: Open
Release Closed Date: Not reported

UST:

Facility ID: 00010382 Facility Type: ACTIVE

Owner Name: NEW 11 MILE & LAHSER SHELL INC

Owner Address: 27050 LAHSER

Owner City,St,Zip: SOUTHFIELD, MI 48034

Owner Country: USA
Owner Contact: Not reported
Owner Phone: (248) 202-6802
Contact: Ed Garcia
Contact Phone: (248) 877-2900
Date of Collection: 01/11/2001
Accuracy: 100

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48794 Longitude: -83.26136

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 10000

 Product:
 Gasoline

 Install Date:
 04/24/1985

 Remove Date:
 10/12/2009

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring/Second

Containment

Piping Material: APT, Double Walled

Piping Type: Pressure

Construction Material: Fiberglass Reinforced Plastic

Impressed Device: No

Tank ID: 2

Tank Status: Removed from Ground

Capacity: 10000 Product: Gasoline Install Date: 04/24/1985

Direction Distance

Elevation Site Database(s) EPA ID Number

SHELL (LASHER CONVENIENCE INC) (Continued)

U003321821

EDR ID Number

Remove Date: 10/13/2009

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring/Second

Containment

Piping Material: APT, Fiberglass Reinforced Plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced Plastic

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 10000

 Product:
 Gasoline

 Install Date:
 04/24/1970

 Remove Date:
 10/13/2009

Tank Release Detection: Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring/Second

Containment

Piping Material: APT, Fiberglass Reinforced Plastic

Piping Type: Pressure

Construction Material: Fiberglass Reinforced Plastic

Impressed Device: No

Tank ID:

Tank Status: Removed from Ground

 Capacity:
 550

 Product:
 Used Oil

 Install Date:
 04/24/1961

 Remove Date:
 05/01/1989

Tank Release Detection: Inventory Control, Manual Tank Gauging, Tank Tightness Testing, Vapor

Monitoring

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled

Piping, Interstitial Monitoring/Second Containment, Line Tightness

Testing, Vapor Monitoring

Piping Material: Galvanized Steel
Piping Type: Not reported

Construction Material: Asphalt Coated or Bare Steel

Impressed Device: No

Tank ID: 8

Tank Status: Currently In Use

Capacity: 1000
Product: Used Oil
Install Date: 12/01/1989
Remove Date: Not reported

Tank Release Detection: Tank Tightness Testing, Inventory Control, Interstitial Monitoring

Double Walled Tank

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring/Second

Containment, Line Tightness Testing

Piping Material: Fiberglass Reinforced Plastic

Piping Type: Pressure, Pressure

Construction Material: Fiberglass Reinforced Plastic, Double Walled

Impressed Device: No

Direction Distance

Elevation Site Database(s) EPA ID Number

SHELL (LASHER CONVENIENCE INC) (Continued)

U003321821

EDR ID Number

Tank ID: 9

Tank Status: Currently In Use

Capacity: 10000
Product: Diesel
Install Date: 05/15/2007
Remove Date: Not reported

Tank Release Detection: Inventory Control, Automatic Tank Gauging, Interstitial Monitoring

Double Walled Tank

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled

Piping

Piping Material: APT, Flexible Piping

Piping Type: Pressure

Construction Material: Fiberglass Reinforced Plastic, Double Walled

Impressed Device: No

Tank ID: 10

Tank Status: Currently In Use

Capacity: 20000
Product: Gasoline
Install Date: 10/20/2009
Remove Date: Not reported

Tank Release Detection: Inventory Control, Automatic Tank Gauging

Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing

Piping Material: Double Walled, Flexible Piping

Piping Type: Pressure

Construction Material: Composite (Steel with Fiberglass), Double Walled

Impressed Device: No

Tank ID: 11

Tank Status: Currently In Use

Capacity: 10000

Product: Gasoline, Diesel, Dual Compartment

Install Date: 10/20/2009 Remove Date: Not reported

Tank Release Detection: Inventory Control, Automatic Tank Gauging, Interstitial Monitoring

Double Walled Tank

Pipe Realease Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled

Piping, Line Tightness Testing

Piping Material: Double Walled, Flexible Piping Piping Type: Pressure, Pressure, Pressure

Construction Material: Composite (Steel with Fiberglass), Double Walled

Impressed Device: No

INVENTORY:

Bea Number: Not reported
Township: Not reported
District: Southeast MI
Data Source: Part 213
Latitude: 42.48794
Longitude: -83.26137

BEA:

Secondary Address: Not reported BEA Number: 4254

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

SHELL (LASHER CONVENIENCE INC) (Continued)

U003321821

District: Southeast MI Date Received: 09/14/2009 Submitter Name: 27050 Lahser, LLC Petition Determination: No Request

Petition Disclosure:

Same Hazardous Substance(s) Category:

Determination 20107A: No Request Reviewer: schlaufj

Division Assigned: Storage Tank Division

Secondary Address: Not reported BEA Number: 4255 Southeast MI District: Date Received: 09/14/2009

Submitter Name: Lahser Convenience, Incorporated

Petition Determination: No Request

Petition Disclosure:

Category: Same Hazardous Substance(s)

Determination 20107A: No Request Reviewer: schlaufi

Division Assigned: Storage Tank Division

WDS:

MI0000876557 Site Id: WMD Id: 391428

Site Specific Name: 11 & LAHSER SHELL Mailing Address: 27050 LAHSER RD

Mailing City/State/Zip: 48034 OAKLAND Mailing County:

G30 **MI INVENTORY \$114035555** HARVARD ROW PLAZA PROPERTY

NE 21700 - 21800 WEST 11 MILE RD. 1/4-1/2 OAKLAND (County), MI 48076

0.323 mi.

1703 ft. Site 1 of 4 in cluster G

INVENTORY: Relative:

Bea Number: 201305437LV Higher

Township: Southfield Actual: District: Southeast MI

695 ft. Data Source: **BEA**

Not reported Latitude: Not reported Longitude:

G31 HARVARD ROW PLAZA PROPERTY MI BEA S113193086 N/A

ΝE 21700 - 21800 WEST 11 MILE RD.

1/4-1/2 SOUTHFIELD, MI 48076

0.323 mi.

Site 2 of 4 in cluster G 1703 ft.

RFA. Relative:

Secondary Address: Not reported Higher BEA Number: 5437

Actual: District: Southeast MI

695 ft. Date Received: 01/11/2013

Submitter Name: Harvard Row Plaza, LLC N/A

MAP FINDINGS Map ID

Direction Distance

Elevation Site Database(s) **EPA ID Number**

HARVARD ROW PLAZA PROPERTY (Continued)

Petition Determination: No Request

Petition Disclosure: 0

Category: Not reported Determination 20107A: No Request Reviewer: lebarj

Division Assigned: Storage Tank Division

G32 **NW - HARVARD ROW, LLC** 21700-21800 WEST ELEVEN MILE NE

SOUTHFIELD, MI 48076 1/4-1/2

0.323 mi.

1703 ft. Site 3 of 4 in cluster G

Relative:

BEA:

Secondary Address: Not reported Higher

BEA Number: 4831

Actual: District: Southeast MI 695 ft. Date Received: 06/09/2011

NW - Harvard Row, LLC Submitter Name:

Petition Determination: No Request

Petition Disclosure:

Category: Not reported Determination 20107A: No Request Reviewer: lebarj Division Assigned: **RRD**

G33 MI INVENTORY

NW - HARVARD ROW, LLC ΝE 21700-21800 WEST ELEVEN MILE 1/4-1/2 OAKLAND (County), MI 48076

0.323 mi.

1703 ft. Site 4 of 4 in cluster G

INVENTORY: Relative:

Bea Number: 201104831LV Higher

Township: Southfield Actual: District: Southeast MI

695 ft. Data Source: BEA

Not reported Latitude: Not reported Longitude:

SOUTHFIELD CO (M54130) MI LUST U000262209 34 South 25189 LAHSER ROAD MI UST N/A 1/4-1/2 SOUTHFIELD, MI 48034 **MI AIRS**

0.425 mi. 2245 ft.

LUST: Relative:

Facility ID: 00011783 Lower

STATE OF MICHIGAN Source:

Actual: AT&T Michigan Owner Name: 670 ft. Owner Address: 308 S Akard Ste 1700

Owner City, St, Zip: Dallas, TX 75202 Owner Contact: Lisa Espinosa Owner Phone: (877) 648-2073

Country: USA

TC04590273.2r Page 65

MI WDS

EDR ID Number

S113193086

MI BEA \$111121013

N/A

S114037376

N/A

Direction Distance

Elevation Site Database(s) EPA ID Number

SOUTHFIELD CO (M54130) (Continued)

U000262209

EDR ID Number

District: Region 1 - SE Michigan District Office

Site Name: Southfield C.o
Latitude: 42.47363
Longitude: -83.26115
Date of Collection: 01/11/2001

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number: C-0085-03
Release Date: 03/06/2003
Substance Released: Kerosene,Kerosene

Release Status: Closed Release Closed Date: 01/27/2004

Leak Number: C-0176-96
Release Date: 03/27/1996
Substance Released: Kerosene
Release Status: Closed
Release Closed Date: 05/16/1997

UST:

Facility ID: 00011783 Facility Type: ACTIVE

Owner Name: AT&T MICHIGAN
Owner Address: 308 S AKARD STE 1700
Owner City,St,Zip: DALLAS, TX 75202

Owner Country: USA

Owner Contact: Lisa Espinosa
Owner Phone: (877) 648-2073
Contact: Rayshell Wamsley
Contact Phone: (214) 464-5394
Date of Collection: 01/11/2001
Accuracy: 100
Accuracy Value Unit: FEET

Accuracy Value Unit: FEET Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.47363 Longitude: -83.26115

Tank ID:

Impressed Device:

Tank Status: Removed from Ground

No

10000 Capacity: Not reported Product: 05/09/1967 Install Date: Remove Date: 03/06/2003 Tank Release Detection: Not reported Pipe Realease Detection: Not reported Piping Material: Not reported Piping Type: Not reported Construction Material: Not reported

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

SOUTHFIELD CO (M54130) (Continued)

U000262209

Tank ID:

Removed from Ground Tank Status:

10000 Capacity: Product: Not reported 10/15/1996 Install Date: 03/06/2003 Remove Date: Tank Release Detection: Not reported Pipe Realease Detection: Not reported Piping Material: Not reported Piping Type: Not reported Construction Material: Not reported

Impressed Device: No

Tank ID:

Tank Status: **Currently In Use**

6000 Capacity: Product: Kerosene Install Date: 10/15/1996 Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging, Interstitial Monitoring Double Walled Tank

Pipe Realease Detection: Interstitial Monitoring Double Walled Piping Piping Material: Fiberglass Reinforced Plastic, Double Walled

Piping Type: Suction: No Valve At Tank

Fiberglass Reinforced Plastic, Double Walled Construction Material:

Impressed Device: Nο

Tank ID:

Tank Status: **Currently In Use**

12000 Capacity: Product: Kerosene Install Date: 08/01/2003 Remove Date: Not reported

Tank Release Detection: Automatic Tank Gauging, Interstitial Monitoring Double Walled Tank

Pipe Realease Detection: Interstitial Monitoring Double Walled Piping Piping Material: Fiberglass Reinforced Plastic, Double Walled

Piping Type: Suction: Valve at Tank

Fiberglass Reinforced Plastic, Double Walled Construction Material:

Impressed Device: No

AIRS:

State Registration Number: N8025 Naics Code: Not reported Contact Name: DANIEL V. JAMES 2103512104 Contact Phone:

Contact Address: MICHIGAN BELL TELEPHONE CO

1458 BLUEBELL DRIVE Contact Address 2: Contact City, St, Zip: LIVERMORE, CA 94551

Permit Number: 97-08 Date Received: 03/26/2008

2 EMERGENCY DIESEL GENERATORS Application Reason:

Record Type: Not reported State County FIPS: Not reported Facility Category: Not reported SIC Primary: Not reported Tribal Code: Not reported

Direction Distance

Elevation Site Database(s) EPA ID Number

SOUTHFIELD CO (M54130) (Continued)

U000262209

EDR ID Number

Facility Status:

Supplemental Location Text:

Business Name:

Principal Product:

Principal Product Description:

Not reported

Not reported

Not reported

UTM Zone (Geo Coordinates Universal Transverse Mercator System): Not reported

UTM Horizontal Coord: Not reported **UTM Vertical Coord:** Not reported Mailing Name: Not reported Mailing Contact Person: Not reported Mailing Street: Not reported Mailing City: Not reported Mailing State: Not reported Mailing Zip: Not reported Mailing Zip 4 Extension: Not reported Compliance Person: Not reported Compliance Area Code: Not reported Compliance Phone Number: Not reported **Emission Inventory Contact Person:** Not reported El Contact Area Code: Not reported El Contact Phone Number: Not reported Permit Contact Person: Not reported Not reported Permit Contact Person Area Code: Permit Contact Person Phone Number: Not reported

Permit Contact Person Area Code:
Permit Contact Person Phone Number:
Federal Employer Id Number:
Wot reported
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported

WDS:

Site Id: MIT270013584

WMD Id: 414681

Site Specific Name: AMERITECH M54130
Mailing Address: 36 SOUTH FAIRVIEW AVE

Mailing City/State/Zip: 60067
Mailing County: Not reported

35 KNOB IN THE WOODS APTS. ENE 20703 KENSINGTON CT 1/4-1/2 SOUTHFIELD, MI 48076 MI LUST MI UST MI WDS

U000262013

N/A

0.450 mi. 2375 ft.

Relative: LUST:

Lower Facility ID: 00005338
Source: STATE OF MICHIGAN

Actual: Owner Name: Hartman & Tyner Inc 679 ft. Owner Address: 24700 W 12 Mile Rd Owner City, St, Zip: Southfield, MI 48034-1264

Owner Contact: Not reported Owner Phone: (313) 352-2010

Country: USA

District: Region 1 - SE Michigan District Office

Site Name: Knob In The Woods (#1)

Latitude: 42.48471 Longitude: -83.25223 Date of Collection: 01/11/2001

Direction Distance

Elevation Site Database(s) EPA ID Number

KNOB IN THE WOODS APTS. (Continued)

Method of Collection: Address Matching-House Number

Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Leak Number: C-2184-91
Release Date: 10/21/1991
Substance Released: Unknown
Release Status: Closed
Release Closed Date: 11/09/1993

Leak Number: C-2579-90
Release Date: 11/20/1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: 11/09/1993

UST:

Facility ID: 00005338
Facility Type: CLOSED

Owner Name: HARTMAN & TYNER INC
Owner Address: 24700 W 12 MILE RD
Owner City,St,Zip: SOUTHFIELD, MI 48034-1264

Owner Country: USA
Owner Contact: Not reported
Owner Phone: (313) 352-2010

Contact: THOMAS A. CIANCIOLO

Contact Phone: (313) 353-3166
Date of Collection: 01/11/2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN

Point Line Area: POINT

Desc Category: Plant Entrance (Freight)

Method of Collection: Address Matching-House Number

Latitude: 42.48471 Longitude: -83.25223

Tank ID:

Tank Status: Removed from Ground

Capacity: Not reported Product: Gasoline Install Date: 04/08/1976 12/04/1990 Remove Date: Tank Release Detection: Not reported Pipe Realease Detection: Not reported Piping Material: Unknown Piping Type: Not reported Construction Material: Unknown Impressed Device: No

Tank ID: 2

Tank Status: Removed from Ground

Capacity: Not reported

EDR ID Number

U000262013

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KNOB IN THE WOODS APTS. (Continued)

U000262013

Product: Gasoline Install Date: 04/08/1968 Remove Date: 10/20/1991 Tank Release Detection: Not reported Pipe Realease Detection: Not reported Piping Material: Unknown Piping Type: Not reported Construction Material: Unknown Impressed Device: No

WDS:

Site Id: MIG000028759

WMD Id: 448481

Site Specific Name: HARTMAN & TINNER Mailing Address: 20703 KENSINGTON CT

Mailing City/State/Zip: 48076 Mailing County: OAKLAND

Site Id: MIG000011939

WMD Id: 456426

KNOB IN THE WOODS Site Specific Name: Mailing Address: 20703 KENSINGTON CT

Mailing City/State/Zip: 48076 Mailing County: OAKLAND Count: 0 records. ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/30/2015 Source: EPA
Date Data Arrived at EDR: 11/07/2015 Telephone: N/A

Number of Days to Update: 58 Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 EPA Region 8

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 5 EPA Region 9

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/30/2015 Source: EPA
Date Data Arrived at EDR: 11/07/2015 Telephone: N/A

Number of Days to Update: 58 Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/30/2015 Date Data Arrived at EDR: 11/07/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 58

Source: EPA Telephone: N/A

Last EDR Contact: 04/05/2016

Next Scheduled EDR Contact: 04/18/2016 Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015 Date Data Arrived at EDR: 04/08/2015 Date Made Active in Reports: 06/11/2015

Number of Days to Update: 64

Source: Environmental Protection Agency

Telephone: 703-603-8704 Last EDR Contact: 04/08/2016

Next Scheduled EDR Contact: 07/18/2016 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/11/2016 Date Data Arrived at EDR: 01/22/2016 Date Made Active in Reports: 03/18/2016

Number of Days to Update: 56

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 04/05/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/11/2016 Date Data Arrived at EDR: 01/22/2016 Date Made Active in Reports: 03/18/2016

Number of Days to Update: 56

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 04/05/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: Environmental Protection Agency

Telephone: 312-886-6186 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: Environmental Protection Agency

Telephone: 312-886-6186 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: Environmental Protection Agency

Telephone: 312-886-6186 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: Environmental Protection Agency

Telephone: 312-886-6186 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016

Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015 Date Data Arrived at EDR: 05/29/2015 Date Made Active in Reports: 06/11/2015

Number of Days to Update: 13

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 02/16/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/10/2015 Date Data Arrived at EDR: 09/11/2015 Date Made Active in Reports: 11/03/2015

Number of Days to Update: 53

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 02/29/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/10/2015 Date Data Arrived at EDR: 09/11/2015 Date Made Active in Reports: 11/03/2015

Number of Days to Update: 53

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 02/29/2016

Next Scheduled EDR Contact: 06/13/2016

Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous

substances.

Date of Government Version: 06/22/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/16/2015

Number of Days to Update: 82

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list. This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Date of Government Version: N/A
Date Data Arrived at EDR: 10/31/2013
Date Made Active in Reports: 11/20/2013

Number of Days to Update: 20

Source: Dept of Environmental Quality

Telephone: 517-284-5103 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: No Update Planned

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/28/2015 Date Data Arrived at EDR: 12/29/2015 Date Made Active in Reports: 02/17/2016

Number of Days to Update: 50

Source: Dept of Environmental Quality

Telephone: 517-335-4035 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Sites

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 02/01/2016 Date Data Arrived at EDR: 02/18/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 46

Source: Dept of Environmental Quality

Telephone: 517-373-9837 Last EDR Contact: 02/18/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: Annually

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015 Date Data Arrived at EDR: 10/23/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 118

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015 Date Data Arrived at EDR: 04/28/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 55

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/20/2015 Date Data Arrived at EDR: 10/30/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 111

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/24/2015 Date Data Arrived at EDR: 12/01/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 34

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015 Date Data Arrived at EDR: 10/29/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 67

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016 Date Data Arrived at EDR: 01/08/2016 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 41

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/04/2015 Date Data Arrived at EDR: 11/13/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 52

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015 Date Data Arrived at EDR: 01/08/2015 Date Made Active in Reports: 02/09/2015

Number of Days to Update: 32

Source: Environmental Protection Agency Telephone: 415-972-3372 Last EDR Contact: 01/27/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010 Date Data Arrived at EDR: 02/16/2010 Date Made Active in Reports: 04/12/2010

Number of Days to Update: 55

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 04/11/2016

Next Scheduled EDR Contact: 07/25/2016 Data Release Frequency: Varies

UST 2: Underground Storage Tank Listing

A listing of underground storage tank site locations that have unknown owner information.

Date of Government Version: 01/25/2016 Date Data Arrived at EDR: 01/27/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 68

Source: Dept of Environmental Quality

Telephone: 517-241-8847 Last EDR Contact: 01/19/2016

Next Scheduled EDR Contact: 05/02/2016 Data Release Frequency: Annually

UST: Underground Storage Tank Facility List

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/03/2015 Date Data Arrived at EDR: 11/18/2015 Date Made Active in Reports: 12/22/2015

Number of Days to Update: 34

Source: Dept of Environmental Quality

Telephone: 517-241-8847 Last EDR Contact: 02/18/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: Annually

AST: Aboveground Tanks

Registered Aboveground Storage Tanks.

Date of Government Version: 01/26/2016 Date Data Arrived at EDR: 01/28/2016 Date Made Active in Reports: 04/01/2016

Number of Days to Update: 64

Source: Dept of Environmental Quality

Telephone: 517-241-8847 Last EDR Contact: 03/21/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: No Update Planned

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014 Date Data Arrived at EDR: 11/25/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 65

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/13/2015 Date Data Arrived at EDR: 10/23/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 118

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014 Date Data Arrived at EDR: 02/13/2015 Date Made Active in Reports: 03/13/2015

Number of Days to Update: 28

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 01/27/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016 Date Data Arrived at EDR: 01/08/2016 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 41

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/20/2015 Date Data Arrived at EDR: 10/30/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 111

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015 Date Data Arrived at EDR: 10/29/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 67

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/24/2015 Date Data Arrived at EDR: 12/01/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 34

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015 Date Data Arrived at EDR: 11/13/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 52

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

AUL: Engineering and Institutional Controls

A listing of sites with institutional and/or engineering controls in place.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 12/11/2015 Date Made Active in Reports: 02/17/2016

Number of Days to Update: 68

Source: Dept of Environmental Quality

Telephone: 517-373-4828 Last EDR Contact: 02/29/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 142

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 04/01/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009

Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields and USTfield Site Database

All state funded Part 201 and 213 sites, as well as LUST sites that have been redeveloped by private entities using the BEA process. Be aware that this is not a list of all of the potential brownfield sites in Michigan.

Date of Government Version: 01/15/2016 Date Data Arrived at EDR: 02/02/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 62

Source: Dept of Environmental Quality

Telephone: 517-373-4805 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

BROWNFIELDS 2: Brownfields Building and Land Site Locations

A listing of brownfield building and land site locations. The listing is a collaborative effort of Michigan Economic Development Corporation, Michigan Economic Developers Association, Detrot Edison, Detroit Area Commercial Board of Realtors

Date of Government Version: 04/09/2007 Date Data Arrived at EDR: 04/10/2007 Date Made Active in Reports: 05/01/2007

Number of Days to Update: 21

Source: Economic Development Corporation

Telephone: 888-522-0103 Last EDR Contact: 02/29/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015 Date Data Arrived at EDR: 12/23/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 03/22/2016

Next Scheduled EDR Contact: 07/04/2016 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF: Inactive Solid Waste Facilities

The database contains historical information and is no longer updated.

Date of Government Version: 03/01/1997 Date Data Arrived at EDR: 02/28/2003 Date Made Active in Reports: 03/06/2003

Number of Days to Update: 6

Source: Dept of Environmental Quality

Telephone: 517-335-4034 Last EDR Contact: 02/28/2003 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities

A listing of recycling center locations.

Date of Government Version: 01/11/2016 Date Data Arrived at EDR: 01/12/2016 Date Made Active in Reports: 02/17/2016

Number of Days to Update: 36

Source: Dept of Environmental Quality

Telephone: 517-241-5719 Last EDR Contact: 03/28/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 02/01/2016

Next Scheduled EDR Contact: 05/16/2016 Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/17/2015 Date Data Arrived at EDR: 12/04/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 76

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 03/01/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: No Update Planned

INVENTORY: Inventory of Facilities

The Inventory of Facilities has three data sources: Facilities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) identified through state funded or private party response activities (Projects); Facilities under Part 213, Leaking Underground Storage Tanks of the NREPA; and Facilities identified through submittals of Baseline Environmental Assessments (BEA) submitted pursuant to Part 201 or Part 213 of the NREPA. The Part 201 Projects Inventory does not include all of the facilities that are subject to regulation under Part 201 because owners are not required to inform the Department of Environmental Quality (DEQ) about the facilities and can pursue cleanup independently. Facilities that are not known to DEQ are not on the Inventory, nor are locations with releases that resulted in low environmental impact. Part 213 facilities listed here may have more than one release; a list of releases for which corrective actions have been completed and list of releases for which corrective action has not been completed is located on the Leaking Underground Storage Tanks Site Search webpage. The DEQ may or may not have reviewed and concurred with the conclusion that the corrective actions described in a closure report meets criteria. A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

Date of Government Version: 01/25/2016 Date Data Arrived at EDR: 01/28/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 67

Source: Department of Environmental Quality

Telephone: 517-284-5136 Last EDR Contact: 01/28/2016

Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

PART 201: Part 201 Site List

A Part 201 Listed site is a location that has been evaluated and scored by the DEQ using the Part 201 scoring model. The location is or includes a "facility" as defined by Part 201, where there has been a release of a hazardous substance(s) in excess of the Part 201 residential criteria, and/or where corrective actions have not been completed under Part 201 to meet the applicable cleanup criteria for unrestricted residential use. The Part 201 List does not include all of the sites of contamination that are subject to regulation under Part 201 because owners are not required to inform the DEQ about the sites and can pursue cleanup independently. Sites of environmental contamination that are not known to DEQ are not on the list, nor are sites with releases that resulted in low environmental impact.

Date of Government Version: 10/01/2013 Date Data Arrived at EDR: 10/03/2014 Date Made Active in Reports: 10/03/2014

Number of Days to Update: 0

Source: Department of Environmental Quality

Telephone: 517-284-5103 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab locations.

Date of Government Version: 11/30/2015 Date Data Arrived at EDR: 02/16/2016 Date Made Active in Reports: 04/07/2016

Number of Days to Update: 51

Source: Department of Community Health

Telephone: 517-373-3740 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

DEL PART 201: Delisted List of Contaminated Sites

A deleted site has been removed from the Part 201 List because information known to the DEQ at the time of the evaluation does not support inclusion on the Part 201 List. This designation is often applied to sites where changes in cleanup criteria resulted in a determination that the site no longer exceeds any applicable cleanup criterion.

A delisted site has been removed from the Part 201 List because response actions have reduced the levels of contaminants to concentrations which meet or are below the criteria for unrestricted residential use.

Date of Government Version: 08/01/2013 Date Data Arrived at EDR: 08/01/2013 Date Made Active in Reports: 09/11/2013

Number of Days to Update: 41

Source: Dept of Environmental Quality Telephone: 517-373-9541 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/17/2015 Date Data Arrived at EDR: 12/04/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 76

Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 03/01/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Quarterly

Local Land Records

LIENS: Lien List

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC * 9607(1) and similar state or local laws. In other words: a lien placed upon a property's title due to an environmental condition

Date of Government Version: 07/07/2015 Date Data Arrived at EDR: 07/24/2015 Date Made Active in Reports: 08/05/2015 Number of Days to Update: 12 Source: Dept of Environmental Quality Telephone: 517-241-7603 Last EDR Contact: 01/22/2016

Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014 Date Data Arrived at EDR: 03/18/2014 Date Made Active in Reports: 04/24/2014

Number of Days to Update: 37

Source: Environmental Protection Agency Telephone: 202-564-6023 Last EDR Contact: 03/11/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015 Date Data Arrived at EDR: 06/26/2015 Date Made Active in Reports: 09/02/2015

Number of Days to Update: 68

Source: U.S. Department of Transportation Telephone: 202-366-4555

Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Annually

PEAS: Pollution Emergency Alerting System

Environmental pollution emergencies reported to the Department of Environmental Quality such as tanker accidents, pipeline breaks, and release of reportable quantities of hazardous substances.

Date of Government Version: 06/10/2015 Date Data Arrived at EDR: 06/12/2015 Date Made Active in Reports: 06/22/2015

Number of Days to Update: 10

Source: Dept of Environmental Quality Telephone: 517-373-8427 Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015 Date Data Arrived at EDR: 03/02/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 34

Source: Environmental Protection Agency

Telephone: 312-886-6186 Last EDR Contact: 03/30/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 10/13/2015

Number of Days to Update: 97

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 03/11/2016

Next Scheduled EDR Contact: 06/20/2016 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS

Telephone: 888-275-8747 Last EDR Contact: 01/15/2016

Next Scheduled EDR Contact: 04/25/2016 Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 02/06/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 339

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 01/15/2016

Next Scheduled EDR Contact: 04/25/2016

Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011 Date Data Arrived at EDR: 03/09/2011 Date Made Active in Reports: 05/02/2011

Number of Days to Update: 54

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 02/19/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015 Date Data Arrived at EDR: 09/03/2015 Date Made Active in Reports: 11/03/2015

Number of Days to Update: 61

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 02/16/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 02/09/2016

Next Scheduled EDR Contact: 05/23/2016 Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 02/12/2016

Next Scheduled EDR Contact: 05/23/2016

Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 01/15/2015 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 14

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 03/24/2016

Next Scheduled EDR Contact: 07/04/2016 Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 11/24/2015 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 133

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 02/24/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011

Number of Days to Update: 77

Source: EPA Telephone: 202-564-4203 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016 Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical

and health information to aid in the cleanup.

Date of Government Version: 11/25/2013 Date Data Arrived at EDR: 12/12/2013 Date Made Active in Reports: 02/24/2014

Number of Days to Update: 74

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 03/08/2016

Next Scheduled EDR Contact: 06/20/2016 Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015 Date Data Arrived at EDR: 08/26/2015 Date Made Active in Reports: 11/03/2015

Number of Days to Update: 69

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 3

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 02/12/2016

Next Scheduled EDR Contact: 05/23/2016 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 10/15/2014 Date Made Active in Reports: 11/17/2014

Number of Days to Update: 33

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 01/12/2016

Next Scheduled EDR Contact: 04/25/2016 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015 Date Data Arrived at EDR: 02/06/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 31

Source: Environmental Protection Agency

Telephone: 202-564-5088 Last EDR Contact: 04/08/2016

Next Scheduled EDR Contact: 07/25/2016 Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/26/2015 Date Data Arrived at EDR: 07/10/2015 Date Made Active in Reports: 10/13/2015

Number of Days to Update: 95

Source: Nuclear Regulatory Commission Telephone: 301-415-7169

Last EDR Contact: 02/08/2016

Next Scheduled EDR Contact: 05/23/2016 Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 08/07/2009 Date Made Active in Reports: 10/22/2009

Number of Days to Update: 76

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 01/13/2016

Next Scheduled EDR Contact: 04/25/2016 Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 09/10/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 03/11/2016

Next Scheduled EDR Contact: 06/20/2016 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011 Date Data Arrived at EDR: 10/19/2011 Date Made Active in Reports: 01/10/2012

Number of Days to Update: 83

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 01/29/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015 Date Data Arrived at EDR: 07/09/2015 Date Made Active in Reports: 09/16/2015

Number of Days to Update: 69

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 04/08/2016

Next Scheduled EDR Contact: 07/18/2016 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008

Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012

Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 02/03/2016

Next Scheduled EDR Contact: 05/16/2016 Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 04/17/2015 Date Made Active in Reports: 06/02/2015

Number of Days to Update: 46

Telephone: Varies

Last EDR Contact: 03/24/2016

Next Scheduled EDR Contact: 07/11/2016

Source: Department of Justice, Consent Decree Library

Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 02/24/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 218

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 02/26/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 12/08/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 34

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 01/15/2016

Next Scheduled EDR Contact: 04/25/2016 Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 11/23/2015 Date Data Arrived at EDR: 11/24/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 86

Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 02/08/2016

Next Scheduled EDR Contact: 05/23/2016 Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010 Date Data Arrived at EDR: 10/07/2011 Date Made Active in Reports: 03/01/2012

Number of Days to Update: 146

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 03/28/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014 Date Data Arrived at EDR: 11/26/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 64

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 04/07/2016

Next Scheduled EDR Contact: 07/18/2016 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health Telephone: 703-305-6451

Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015 Date Data Arrived at EDR: 10/27/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 69

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 03/24/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

> Date of Government Version: 10/20/2015 Date Data Arrived at EDR: 10/27/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 69

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 03/24/2016

Next Scheduled EDR Contact: 07/11/2016 Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2015 Date Data Arrived at EDR: 09/01/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 125

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 03/02/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008

Number of Days to Update: 49

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 03/04/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS Telephone: 703-648-7709 Last EDR Contact: 03/04/2016

Next Scheduled EDR Contact: 06/13/2016 Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015 Date Data Arrived at EDR: 09/09/2015 Date Made Active in Reports: 11/03/2015

Number of Days to Update: 55

Source: EPA

Telephone: (312) 353-2000 Last EDR Contact: 03/08/2016

Next Scheduled EDR Contact: 06/20/2016 Data Release Frequency: Quarterly

AIRS: Permit and Emissions Inventory Data Permit and emissions inventory data.

Date of Government Version: 01/06/2016 Date Data Arrived at EDR: 01/08/2016 Date Made Active in Reports: 02/17/2016

Number of Days to Update: 40

Source: Dept of Environmental Quality

Telephone: 517-373-7074 Last EDR Contact: 03/21/2016

Next Scheduled EDR Contact: 07/04/2016 Data Release Frequency: Varies

BEA: Baseline Environmental Assessment Database

A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

Date of Government Version: 08/21/2013 Date Data Arrived at EDR: 08/23/2013 Date Made Active in Reports: 09/12/2013

Number of Days to Update: 20

Source: Dept of Environmental Quality

Telephone: 517-373-9541 Last EDR Contact: 02/15/2016

Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: No Update Planned

COAL ASH: Coal Ash Disposal Sites

Coal fired power plants in Southeast Michigan that have coal ash handling on site.

Date of Government Version: 10/15/2014 Date Data Arrived at EDR: 10/16/2014 Date Made Active in Reports: 11/26/2014

Number of Days to Update: 41

Source: Dept of Environmental Quality

Telephone: 586-753-3754 Last EDR Contact: 01/04/2016

Next Scheduled EDR Contact: 04/18/2016

Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Establishments

A listing of drycleaning facilities in Michigan.

Date of Government Version: 01/26/2016 Date Data Arrived at EDR: 01/29/2016 Date Made Active in Reports: 04/01/2016

Number of Days to Update: 63

Source: Dept of Environmental Quality

Telephone: 517-335-4586 Last EDR Contact: 01/19/2016

Next Scheduled EDR Contact: 05/02/2016 Data Release Frequency: Annually

Financial Assurance 1: Financial Assurance Information Listing

Financial assurance information.

Date of Government Version: 02/10/2016 Date Data Arrived at EDR: 02/12/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 52

Source: Dept of Environmental Quality

Telephone: 517-335-6610 Last EDR Contact: 04/04/2016

Next Scheduled EDR Contact: 07/18/2016 Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the

owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/05/2011 Date Data Arrived at EDR: 01/07/2011 Date Made Active in Reports: 02/14/2011

Number of Days to Update: 38

Source: Dept of Environmental Quality

Telephone: 517-335-4034 Last EDR Contact: 03/28/2016

Next Scheduled EDR Contact: 07/11/2016

Data Release Frequency: Varies

LEAD CERT: Lead Safe Housing Registry

A listing of Michigan properties included in the Lead Safe Housing Registry.

Date of Government Version: 09/15/2015 Date Data Arrived at EDR: 09/16/2015 Date Made Active in Reports: 09/30/2015

Number of Days to Update: 14

Source: Department of Community Health

Telephone: 517-335-9699 Last EDR Contact: 03/04/2016

Next Scheduled EDR Contact: 06/20/2016 Data Release Frequency: Quarterly

NPDES: List of Active NPDES Permits

General information regarding NPDES (National Pollutant Discharge Elimination System) permits and NPDES Storm Water permits.

Date of Government Version: 07/07/2015 Date Data Arrived at EDR: 07/09/2015 Date Made Active in Reports: 08/05/2015

Number of Days to Update: 27

Source: Dept of Environmental Quality

Telephone: 517-241-1300 Last EDR Contact: 04/07/2016

Next Scheduled EDR Contact: 07/18/2016 Data Release Frequency: Varies

UIC: Underground Injection Wells Database

A listing of underground injection well locations. The UIC Program is responsible for regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal.

Date of Government Version: 01/25/2016 Date Data Arrived at EDR: 01/27/2016 Date Made Active in Reports: 04/07/2016

Number of Days to Update: 71

Source: Dept of Environmental Quality Telephone: 517-241-1515 Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

WDS: Waste Data System

The Waste Data System (WDS) tracks activities at facilities regulated by the Solid Waste, Scrap Tire, Hazardous Waste, and Liquid Industrial Waste programs.

Date of Government Version: 02/26/2016 Date Data Arrived at EDR: 03/01/2016 Date Made Active in Reports: 04/04/2016

Number of Days to Update: 34

Source: Dept of Environmental Quality Telephone: 517-284-6562

Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015 Date Data Arrived at EDR: 09/23/2015 Date Made Active in Reports: 01/04/2016

Number of Days to Update: 103

Source: Environmental Protection Agency

Telephone: 202-564-2280 Last EDR Contact: 03/23/2016

Next Scheduled EDR Contact: 07/04/2016 Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/23/2015 Date Data Arrived at EDR: 11/24/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 86

Source: EPA Telephone: 800-385-6164 Last EDR Contact: 02/24/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A

Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A

Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Source: EDR, Inc. Date Data Arrived at EDR: N/A Telephone: N/A Last EDR Contact: N/A Date Made Active in Reports: N/A

Next Scheduled EDR Contact: N/A Number of Days to Update: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA PART 201: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 12/24/2013

Number of Days to Update: 176

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 01/13/2014

Number of Days to Update: 196

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A Date Data Arrived at EDR: 07/01/2013 Date Made Active in Reports: 12/24/2013

Number of Days to Update: 176

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013 Date Data Arrived at EDR: 08/19/2013 Date Made Active in Reports: 10/03/2013

Number of Days to Update: 45

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 02/18/2016

Next Scheduled EDR Contact: 05/30/2016 Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information Hazardous waste manifest information.

> Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 07/17/2015 Date Made Active in Reports: 08/12/2015

Number of Days to Update: 26

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 01/15/2016

Next Scheduled EDR Contact: 04/25/2016 Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD

facility

Date of Government Version: 02/01/2016 Date Data Arrived at EDR: 02/03/2016 Date Made Active in Reports: 03/22/2016

Number of Days to Update: 48

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 02/03/2016

Next Scheduled EDR Contact: 05/16/2016 Data Release Frequency: Annually

PA MANIFEST: Manifest Information Hazardous waste manifest information.

> Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/24/2015 Date Made Active in Reports: 08/18/2015

Number of Days to Update: 25

Source: Department of Environmental Protection

Telephone: 717-783-8990 Last EDR Contact: 01/19/2016

Next Scheduled EDR Contact: 05/02/2016 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 06/19/2015 Date Made Active in Reports: 07/15/2015

Number of Days to Update: 26

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 03/21/2016

Next Scheduled EDR Contact: 06/06/2016 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 03/19/2015 Date Made Active in Reports: 04/07/2015

Number of Days to Update: 19

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 03/14/2016

Next Scheduled EDR Contact: 06/27/2016 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Centers, Group & Family Homes

Source: Bureau of REgulatory Services

Telephone: 517-373-8300

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources

Telephone: 517-241-2254

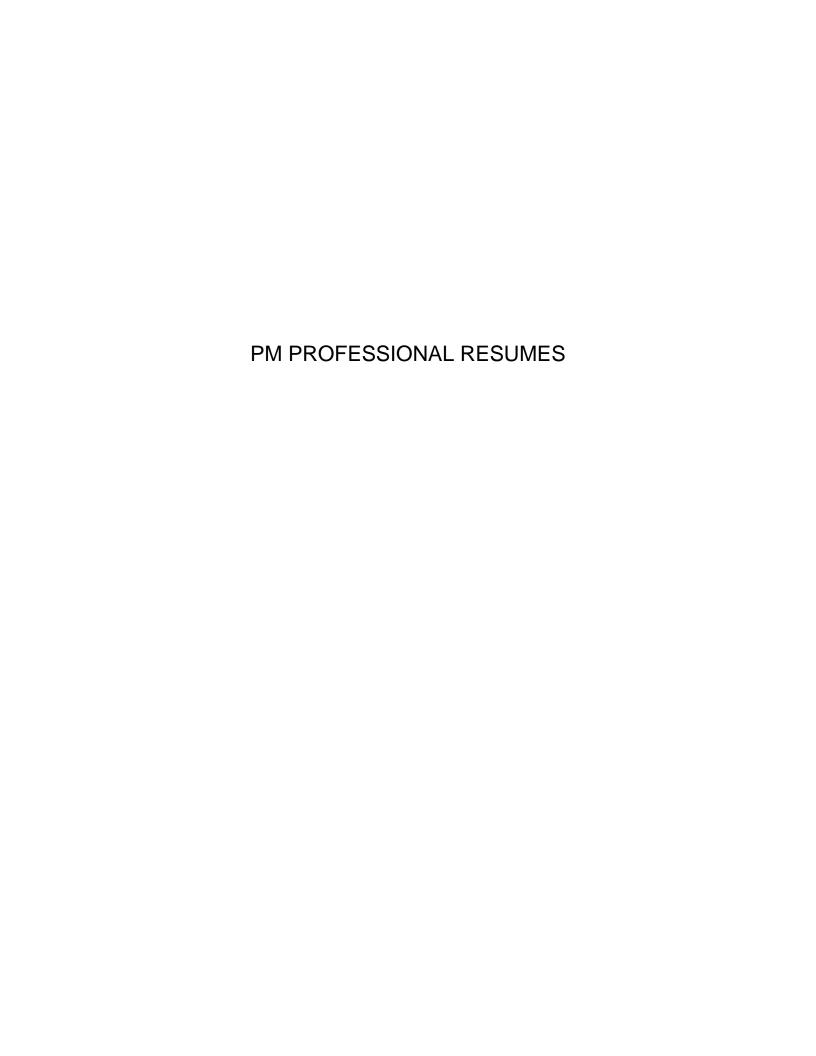
Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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Appendix E









1.800.313.2966 www.pmenv.com hack@pmenv.com

Education

- Eastern Michigan University
 B.S. in Professional Geology
- Colorado State University-Graduate Studies Hydrology and Hydrogeology

TONIA HACK

STAFF CONSULTANT

Mrs. Hack has over 4 years of experience conducting hydrologic investigations and data analysis involving groundwater and its interactions with surface water.

Areas of expertise

- Staff researcher for Phase I Environmental Site Assessments (ESAs).
- Data collection, site investigation, and preparation of Phase I ESAs.
- Collection and evaluation of data for Transaction Screens, Phase I Reports, and preparation of reports.
- Experience in implementation and completion of various site assessment standards and profession protocol and commercial lending requirements (ASTM E-1527).





1.800.313.2966 www.pmenv.com meyer@pmenv.com

Education

- University of Texas at Arlington, B.S. Civil Engineering.
- ASTM Phase I Process Training
- EDR, Property Condition Assessment Training

Certifications

- Certified EPA/AHERA Building Inspector/205349, 1992
- EPA Model Curriculum for Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X), 1992
- Meets the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312
- State of Texas Licensed Asbestos Management Planner (1995)
- Texas Certified Lead-based Paint Inspector/ Risk Assessor/Management Planner, 1999
- CEI Certified Environmental Risk Assessor, Environmental Assessment Association, 1991
- NIOSH 582, Microscopic Identification of Asbestos, 1993

Professional Activities

- ASTM E1527 Committee Member
- National Association of Environmental Professionals Environmental Bankers Association
- Society of Women Engineers (Young Woman of the Year, 1991)
- NIOSH 582, Microscopic Identification of Asbestos, 1993

LANEICIA MEYER

SENIOR PROJECT CONSULTANT

Ms. Meyer has been performing, writing, and reviewing Phase I environmental site assessments for various types of property for over 25 years, including completion of over 1,000 Phase I environmental site assessment reports. In addition, Ms. Meyer has reviewed over 5,700 Phase I environmental site assessments prepared by others, including technical oversight for many of those Projects. She has presented numerous sessions on Due Diligence and ASTM 1527 at professional conferences, has been an expert contributor to Mortgage Banking magazine, and advises on asbestos regulations for the Texas Department of Health.

She has extensive experience in environmental risk management, environmental & engineering due diligence, M&A, and lender due diligence.

She regularly works with financial institutions, investors, developers, retail petroleum clients, municipalities, industries, business and government agencies and regulators.

Areas of expertise

- Environmental Due Diligence for financial instructions, investor, developers and government agencies including:
 - Phase I & II ESAs
 - Property Condition Assessments
 - · Vapor intrusion investigations
 - Due Care Plans and Continuing Obligations Evaluations
 - Industrial Hygiene Services experience (asbestos, radon, lead and mold)
- Experience in extensive hotel real estate portfolio, including environmental risk analysis/reduction relating to asbestos containing materials, lead based paint, mold, and environmental due diligence during acquisition and divestment of globally located hotel locations.
- Extensive experience in the management of environmental due diligence associated with foreclosed properties for the FDIC.
- Managed large portfolio of automotive dealerships throughout the south and southeast as part of a national automotive portfolio. The automotive dealerships had numerous environmental concerns including underground storage tanks, past service operations, oil/water separators, and in -ground hydraulic lifts.





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Education

 Michigan State University B.S. Geology

Registration

Professional Geologist

State of Indiana

Certified UST Professional

State of Michigan

Certifications

- OSHA 1910.120 Hazardous Waste Training
- American Red Cross Standard First Aid and Adult CPR
- Meets the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312

Professional Activities

- Michigan Association of Environmental Professionals
- Environmental Bankers Association

KEVIN M. KRUSZEWSKI, P.G., Q.C.

SENIOR ENVIRONMENTAL RISK MANAGER

Mr. Kruszewski is a Vice President of Environmental Risk Management at PM Environmental, Inc. and has served clients in over 48 states since 1988. He specializes in Phase I and Phase II Environmental Site Assessments (ESAs), Baseline Environmental Assessments (BEAs), and Due Care Plans, Underground Storage Tank (UST) Closures, and Lender Risk Management. Mr. Kruszewski has been involved in thousands of transactions, including typical Environmental Due Diligence for purchase and refinance transactions, and participations and foreclosures. His recent focus incudes serving financial clients based in the Midwest with investment interests across the country.

Areas of expertise

- Real estate portfolio analysis for evaluation of environmental risk associated with single and multi property transactions for the lending industry.
- Collateral and exposure analysis for over 3,000 real estate transactions, including single and multi commercial, industrial, and multi state properties
- Management of environmental due diligence associates with foreclosed properties.
- Peer/Senior Technical Review for Baseline Environmental Assessment (BEA) Projects.
- Peer/Senior Technical review for Due Care Analysis for BEAs in accordance with the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, Parts 201 and 213
- Peer/Senior Technical review of Phase I, Phase II, Phase III Environmental Site Assessment Projects.
- Peer/Senior Technical review for Leaking Underground Storage Tank (LUST) Projects, including risk evaluation for the lending industry.
- Technical review of land use based Corrective Action Plans.
- Local, State, and Federal Regulatory Acts.
- Technical Review of feasibility studies for the remediation of soil and groundwater.
- Technical Review of generic and site-specific risk assessments.
- On-site management of the containment and recovery of dense nonaqueous phase liquids (DNAPLs).

Appendix F



COMMON ACRONYMS AND TERMINOLOGY USED IN THE COURSE OF THIS PHASE I ESA

The following is a list of common acronyms:

All Appropriate Inquiry	AAI
Asbestos Containing Materials	ACM
Aboveground Storage Tank	AST
American Society for Testing Materials	ASTM
Approximate Minimum Search Distance	ASMD
Comprehensive Environmental Response, Compensation and Liability Act	CERCLA
Environmental Data Resources	EDR
Environmental Site Assessment	ESA
Federal Emergency Response Notification System	ERNS
Large Quantity Generator	LQG
Leaking Underground Storage Tank	LUST
National Priority List	NPL
No Further Remedial Action Planned	NFRAP
PM Environmental, Inc.	PME
Polychlorinated Biphenyls	PCBs
Resource Conservation and Recovery Act	RCRA
Small Quantity Generator	SQG
Treatment Storage and Disposal Facility	TSD
Underground Storage Tank	UST
United States Environmental Protection Agency	USEPA

TERMINOLOGY

The following provides definitions and descriptions of certain terms that may be used in this report. Several terms are defined by ASTM Standard Practice E 1527. The Standard Practice should be referenced for further detail (such as the precise wording), related definitions, or additional explanation regarding the meaning of terms.

Asbestos containing material (ACM): Any material found to contain greater than 1% asbestos using an analytical method that is approved by the USEPA for asbestos analysis.

De minimis conditions: Conditions that generally do not present a material risk or harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Friable material: Defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) as a material that can be pulverized or reduced to dust using hand pressure only.

General risk of enforcement action: The likelihood that an environmental condition would be subject to enforcement action if brought to the attention of appropriate

governmental agencies. If the circumstances suggest an enforcement action would be more likely than not, then the condition is considered a general risk of enforcement action.

Historical recognized environmental condition (HREC): Environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently. The final decision rests with the environmental professional and will be influenced by the current impact of the historical recognized environmental condition on the subject property. If a past release of any hazardous substances or petroleum products has occurred in connection with the subject property, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered a historical recognized environmental condition.

Non-friable material: Defined by National Emission Standards for Hazardous Air Pollutants (NESHAP) as a material that cannot be pulverized or reduced to dust using hand pressure only. According to NESHAP, non-friable building materials include those in Category I (packings, gaskets, resilient floor coverings/adhesives, and asphalt roofing materials) and those in Category II (all other materials).

Recognized environmental condition (REC): The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the subject property or into the ground, ground water, or surface water of the subject property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Subject property: The area that is the focus of a Phase I Environmental Site Assessment. The boundaries are not necessarily consistent with recorded legal descriptions of real estate, and are defined by the User.

Suspect ACM of concern: Defined as "(I) all friable suspect ACMs (II) any non-friable suspect ACMs expected to be disturbed by renovation or demolition activities planned for the subject property."

General Scope of Services for Phase I ESA

The purpose of the Phase I ESA is to gather sufficient information to develop an independent professional opinion about the environmental condition of the subject property. The ESA will be conducted in an attempt to satisfy the ASTM Standard (E-1527-13) and the U.S. EPA Standards and Practices for All Appropriate Inquiry as defined in the Small Business Liability Relief and Brownfields Revitalization Act. The Phase I ESA will encompass the following scope of work:

Records Review

- Federal and State database search for sites within the ASTM approximate minimum search distances.
- Review of one or more additional state environmental record sources (e.g., fire department, health department, published local or state site contamination lists, etc.). PM is typically exhaustive in inquiry with these resources.
- Utilization of as many of the ASTM standard historical sources as necessary and as reasonably ascertainable and likely to be useful to document all obvious uses of the subject property from the present, back to the subject property's first developed usage (agricultural or the placement of fill) or 1940, whichever is earlier (e.g., aerial photographs, fire insurance maps, topographic maps, street directories, building record and other sources including knowledgeable interviewees). PM is typically exhaustive in usage of these resources to document subject property historical usages. Chain of title is not typically consulted by PM unless all other standard and historical sources cannot adequately document subject property usages or if required by a lender. A separate fee to the lump sum quoted will be assessed for obtainment of chain of title.
- A records review in accordance with the requirements for a Vapor Intrusion Assessment per ASTM E-2600-08 is not included in this scope of work.

Site Reconnaissance

- The objective of the site reconnaissance is to obtain information regarding the likelihood of recognized environmental conditions in connection with the subject property.
- The exterior of the subject property and any structures, as well as, pathways, roads, etc., will be visually and physically observed.
- The interior of the structures on the subject property will be visually and physically observed. This includes all common areas, maintenance and repair rooms, boiler rooms and representative number of occupant spaces. Observations under floors, above ceilings or behind walls are not required unless specified by requirements other than the ASTM standard.
- PM will evaluate non-ASTM scope issues with a visual inspection, and comment on asbestos containing building materials, lead based paint, and water intrusion associated with mold. Sampling is not included within this scope of work, but can be completed under a separate proposal.
- Current and past uses of the subject property and adjoining properties, and general uses of surrounding properties, to the extent visually and physically observed will be recorded. Emphasis is placed on subject property or adjoining property usages involving use, treatment, storage, disposal or generation of hazardous substances or petroleum products. These observations may include process details on raw material and waste management practices.
- General description of structures and improvements on the subject property (number and age of buildings, ancillary structures, utilities, storage tanks, hazardous substance and petroleum product usage, general chemical or raw material usage, heating and cooling, stains, solid waste, waste water, etc.).

Interviews with Owners and Occupants

• Interviews with owners, occupants, key site manager and user (person on behalf Phase I ESA conducted), typically with regard to information about current and historical uses, general site setting information, site specific documents, litigation, administrative orders, notices of violations with regard to environmental issues, etc.

Interviews with Local Government Officials

A reasonable attempt will be made to interview at least one staff member of any of the following: the
local fire department, the local agency or state agency having jurisdiction over environmental matters in
the area in which the subject property is located, and/or the local health department. PM is typically
exhaustive in its inquiry of these sources, unless professional experience has indicated the resource is
not beneficial.

Evaluation and Report Preparation

• The report of the Phase I ESA findings will generally follow the ASTM format unless otherwise requested by the client or as outlined in any applicable lender requirements. The report will include documentation of sources, methodology, limitations, and credentials. Liability/risk evaluations, recommendations for Phase II ESA testing and remediation techniques are not provided within the scope of an ASTM performed assessment. Phase I ESA reports are kept in the strictest client confidence and are issued directly to the client. Issuance or reliance on the Phase I ESA report for purposes of making loan decisions by a private lender may be included in the Phase I ESA report if specified by the client.

USER'S CONTINUING OBLIGATIONS UNDER CERCLA

Conducting a Phase I ESA alone does not provide a landowner with protection against CERCLA liability. Landowners who want to maintain a bona Fide Prospective Purchaser, an Innocent Landowner, or a Contiguous Property Owner Defense must also comply with other pre-acquisition and post-acquisition requirements in the CERCLA regulations and AAI standards. The responsibilities for each defense are summarized below.

Bona Fide Prospective Purchaser Responsibilities

The Bona Fide Prospective Purchaser defense is intended for individuals or entities purchasing a property known to be contaminated. To obtain and maintain the defense, the individual or entity seeking the defense must also satisfy the following requirements (AAI, Section II D.1.):

- Have acquired a property after all disposal activities involving hazardous substances ceased at the property;
- Provide all legally required notices with respect to the discovery or release of any hazardous substances at the property;
- Exercise appropriate care by taking reasonable steps to stop continuing releases, prevent any threatened future releases, and prevent or limit human, environmental, or natural resources exposure to any previously released hazardous substance;
- Provide full cooperation, assistance, and access to persons authorized to conduct response actions or natural resource restorations;
- Comply with land use restrictions established or relied on in connection with a response action;
- Not impede the effectiveness or integrity of any institutional controls;
- Comply with any CERCLA request for information or administrative subpoena; and
- Not be potentially liable, or affiliated with any other person who is potentially liable for response costs for addressing releases at the property.

Innocent Landowner Responsibilities

The Innocent Landowner Defense protects individuals or entities (ultimately the "property owner") purchasing a property that is not known to be contaminated. The property owner must also satisfy the following requirements to obtain and maintain the defense (AAI, Section II D.3 and CERCLA Section 107(b)(3)):

- Have no reason to know that any hazardous substance which is the subject of a release of threatened release was disposed of on, in, or at the facility;
- Provide full cooperation, assistance and access to persons authorized to conduct response actions at the property;
- Comply with any land use restrictions and not impeding the effectiveness or integrity of any institutional controls;

- Take reasonable steps to stop continuing releases, prevent any threatened release, and prevent to limit human, environmental, or natural resource exposure to any hazardous substances released on or from the landowner's property;
- Demonstrate that the act or omission that caused the release or threat of release of hazardous substances and the resulting damages were caused by the third party with whom the person does not have employment, agency, or contractual relationship;
- Exercise due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances;
- Take precautions against foreseeable acts or omissions of a third party and the consequences that could result from such acts or omissions.

Contiguous Property Owner Defense

The Contiguous Property Owner Defense protects individuals or entities purchasing a property that is not known to be contaminated, but could be contaminated by migration from a contiguous property owned by someone else. To qualify as a contiguous property owner, a landowner must have no knowledge of contamination prior to acquisition, or reason to know of contamination at the time of acquisition, have conducted AAI, and meet all of the criteria set forth in AAI Section II.D.2 and CERCLA Section 107(q)(1)(A), which include:

- Not cause, contribute, or consent to the release or threatened release;
- Not be potentially liable nor affiliated with nay other person potentially liable for response costs at the property;
- Take reasonable steps to stop continuing releases, prevent any threatened release, and prevent or limit human, environmental, or natural resource exposure to any hazardous substances released on or from the landowner's property;
- Provide full cooperation, assistance, and access to persons authorized to conduct response actions or natural resource restorations;
- Comply with land use restrictions established or relied on in connection with a response action;
- Not impede the effectiveness or integrity of any institutional controls;
- Comply with any CERCLA request for information or administrative subpoena;
- Provide all legally required notices with respect to discovery or release of any hazardous substances at the property.

Persons who know, or have reason to know, that the property is or could be contaminated at the time of acquisition of a property cannot qualify for the liability protection as a contiguous property owner, but may be entitles to Bona Fide Prospective Purchaser status.